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JPRS 80990

7 June 1982

# USSR Report

HUMAN RESOURCES

No. 55

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## LABOR

### BETTER UTILIZATION OF CENTRAL ASIAN MANPOWER URGED

Moscow SOTSIALISTICHESKIY TRUD in Russian No 3, Mar 82 pp 68-73

[Article by V. Kuz'min, senior research associate of the Scientific Research Institute of Economics attached to USSR Gosplan: "Utilize More Completely the Labor Potential of the Republics of Central Asia (From a Conference in Dushanbe)"]

[Text] A scientific coordinating conference on the problem "The Formation and Efficiency of the Use of Manpower Resources in the National Economy During the 11th Five-Year Plan and the Long-Range Future," at which questions of employment in the republics of Central Asia in connection with the increase of the influence of demographic factors were the subject of a broad discussion, was held at the end of last year in Dushanbe. Staff members of USSR Gosplan, the USSR State Committee for Labor and Social Problems, the USSR Central Statistical Administration and those of the union republics and representatives of a number of higher educational institutions and scientific research institutes, who are engaged in research in the area of demography and the formulation of means of the efficient employment of the population, participated in it. Doctor of Economic Sciences R. Ubaydullayeva, deputy director of the Institute of Economics of the Uzbek SSR Academy of Sciences; Corresponding Member of the Tajik SSR Academy of Sciences R. Rakhimov, director of the Institute of Economics of the Tajik SSR; Doctor of Economic Sciences V. Kostakov, chief of the Sector of the Forecasting of Manpower Resources of the Scientific Research Institute of Economics attached to USSR Gosplan; Candidate of Economic Sciences L. Tumanov, director of the Tajik Branch of the Scientific Research Institute of Labor, and Candidate of Economic Sciences I. Volokhin, chief of the Department of Labor and Wages of the Tajik SSR Gosplan, delivered reports.

When speaking about the means of achieving the more complete and efficient use of manpower resources on the territorial level, it is necessary to take into account the differences in the formation of the employment of the population in each union republic, which objectively stem from the entire course of their historical development. In the next few years the growth of the population of able-bodied age in the USSR will take place for the most part owing to the republics of Central Asia, Transcaucasia and the southern regions of the Kazakh SSR. Therefore, the efficient use here of manpower resources is already now attracting particular attention.

In the national economy of the country this economic region is a unique territorial production complex with specific natural, climatic and socioeconomic conditions. It is a region of irrigated farming, which functions in the all-union division of labor as the main cotton base and the most important center of silkworm and karakul

breeding. At the same time it has natural resources and mineral deposits, on the basis of which nonferrous metallurgy, the gas industry and machine building are being developed.

However, as R. Ubaydullayeva noted, the further growth of the economy of the republics of Central Asia and the improvement of their sectorial structure and economic specialization are faced with the need to solve difficult problems of the formation and use of manpower resources.

In contrast to the European part of the RSFSR, the Ukraine, Belorussia and the Baltic republics, where at present it is important to meet the needs of developing sectors and regions for manpower, here the problem of involving the rapidly growing population in social production is becoming the main problem.

One of the causes of the underutilization of the manpower resources in the republics of Central Asia is the low mobility of the indigenous, especially the rural inhabitants. In spite of the fact that during the years of the 10th Five-Year Plan the young people of the indigenous nationalities began to show their worth a bit more actively with respect to migration, rural migration in the formation of the population of the cities and its intensity for the present are still not meeting the needs of industrial development. This circumstance, as L. Maksakova, chief of a sector of the Scientific Research Institute of Economics attached to the Uzbek SSR Gosplan, emphasized, is playing a substantial role, since interrepublic migration as a factor of the formation of manpower resources for this region is losing its importance. The lack of the necessary disposition among the local population to territorial transfers results from a large number of causes of a socioeconomic and ethnic nature, including peculiarities of their reproductive behavior, which is oriented toward large families, the traditional attachment to the place where one's parents live and the still inadequate vocational training for work in industrial sectors.

Another important cause of the incomplete utilization of local manpower resources in Central Asia is the fact that the industrial enterprises here are concentrated primarily in large cities,<sup>1</sup> the way of life in which at times is still unacceptable to the indigenous population. This is leading to the formation of a shortage of manpower and the incomplete utilization of the already available production potential. The shift coefficient in a number of sectors of industry, even in those to which the local population gives preference, is lower than the average for the country.

At least two conditions are necessary for the achievement of a balance of the supply and demand of manpower in the republics of Central Asia: a sufficient number of properly located workplaces and the appropriate number of vocationally trained personnel.

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1. Thus, until recently the industry of Tajikistan was concentrated for the most part in two cities--Dushanbe and Leninabad, in which 16 percent of the population and 56 percent of the number of industrial personnel of the republic are concentrated (see the article of N. Shokin, N. Khonaliyev and D. Kurtanidze in IZVESTIYA AN SSSR, SERIYA EKONOMICHESKAYA, No 4, 1981, p 64).

The present approach to the training of personnel requires along with the increase of the educational level the further professionalization of training and the well-founded determination of the real needs of production for skilled workers and specialists with a breakdown by occupational and skills groups. The basis of the scientific approach to the planning of the training of such personnel for the republics of Central Asia is the program of their general economic development. The success of the matter depends on how the questions of the location of production, the changes of its sectorial structure and the consideration of the need for personnel will be coordinated. Therefore, the determination of the factors, which already today are influencing the location of production, the specialization and size of the enterprises, which are to be built in the immediate and distance future, is acquiring paramount importance. In this case the consideration of the sex-age structure, educational, occupational and skills level of the population, which has not been involved in social production, as well as the peculiarities of the settlement of the indigenous inhabitants is of great importance. It is also important to bear in mind here that the level of the birth rate and the rate of the natural growth of the population in small and medium-sized cities are not lower, and frequently even higher than in the village. (A detailed socioeconomic and demographic characterization of the population of the Central Asian region was given by R. Ubaydullayeva.)

Previously, during the period of the strengthening of the traditional sectors of industry and industrialization industrial enterprises were built in those regions where there were at least some engineering and transportation supply lines and skilled personnel (moreover, assistance with manpower on the part of other republics was not limited by the demographic situation in them). At present under the conditions of the rapid growth of manpower resources new industrial enterprises should become an important means of the rationalization of the employment of the population and the increase of the contribution of these republics to the all-union fund in conformity with the objective requirements of the territorial division of labor.

The convergence of the republics of Central Asia in the nature of the employment of the population with other regions of the country presumes along with the noted measures the more extensive use of the positive labor experience of these peoples. Such aspects and traits of the way of life of the indigenous nationalities of this region as discipline, diligence and the skills of cultivating cotton and other crops, which have been developed and are passed down from generation to generation, are the prerequisites of the intensive development of specialized agricultural production and promote the preservation of the traditions of the distinctive folk craft, in particular, the skills of manual rug weaving, embroidery, pottery making, the products of which are of great artistic value and enjoy world recognition. It is also necessary to take these aspects into account in the practice of the planning and location of production because until recently they were far from always taken into consideration. The previously noted concentration of industry for the most part in large cities and its inadequate development in small and medium-sized cities; the structure of the rural economy, in case of which agriculture is only directly multisectorial; the predominance in the increase of industrial personnel engaged directly in production of those working in the sectors of machine building, where the creation of one workplace is more expensive than in light and the food industries, which are capable of hiring significant numbers of workers and operate on low raw materials, and so on attest to this.

The convergence of the republics in the proportion of those employed in industry does not mean that they should also be identical with respect to the structure of industrial production. Especially as great differences exist between the groups of republics in the ratio of those employed in agriculture, on the one hand, and in the sectors of the processing of agricultural raw materials, on the other, which is of especially great importance for Central Asia. The analysis shows that the optimization of the structure of the employment of the population in labor-abundant regions from the point of view of the indicated ratio occurs slowly. The possibilities, which exist in light and the food industries for the decrease of agricultural employment by means of its increase in these sectors, are being used far from completely. In spite of the fact that about half of all the industrial personnel of the region, who are engaged directly in production, work in light and the food industries (which is considerably more than on the average for the country), even greater reserves exist here for the development of these sectors by the release of workers from agriculture.

For example, the reserves for the increase of employment by the intensive growth of the cotton industry are considerable, but for the present they are being used extremely inadequately. The present level of the development of this sector does not conform yet to the amounts of raw cotton being produced in the region. The republics of Central Asia provide slightly more than nine-tenths of the all-union production of this valuable raw material. The main capacities for its processing are concentrated primarily in the RSFSR, the Belorussian SSR and other regions of the European part of the country. At the same time a significant portion of the cotton being hauled away is returned after processing in the form of finished products for meeting the needs of the growing population for cotton items, having made a trip of 6,000-7,000 km. From an economic point of view and for the purposes of the maximum increase of the number of workplaces it is expedient, in our opinion, without detriment to the central regions to process cotton fiber locally in substantially greater amounts, especially as in the central regions themselves at times it is necessary to specially attract manpower to textile enterprises. The capacities released in this case can be used for the production of a larger amount of fabrics made from synthetic fibers. Similar reserves of the increase of employment, especially of the female population, exist in such sectors as the sewing, knitwear, carpet and local industry.

As was noted in the speech of A. Mirzoyev, chief of a department of the Council for the Study of Productive Forces of the Tajik SSR Gosplan, the further development of the food industry, first of all the canning and the fruit and vegetable industries, and the location of small, technically well-equipped enterprises directly in rural areas, especially in large villages, are of great practical importance. Taking into account that the process of processing raw materials at enterprises of the food industry (when perishable and untransportable products were processed) by fixed periods takes place during the period of the harvesting of the crop, when calculating the capacities of these enterprises it is necessary to envisage the construction of the appropriate number of storehouses, refrigerators, warehouses, shops for the production of packaging and so forth. In conjunction with the enterprises of the food industry it is expedient to create separate shops of machine building specialization, which could service agricultural equipment, supply kolkhozes and sovkhozes with spare parts and ensure the high quality and timely repair of equipment, which will make it possible to decrease substantially the losses due to the seasonal nature of agricultural production.



The bringing of industrial and other enterprises in the Central Asian Economic Region closer to the sources of manpower is justified, necessary and in the end economically advantageous, in spite of the additional costs connected with the creation of new transportation and engineering supply lines. This requires far fewer assets, especially at first, for housing construction, since those living in rural areas, in economically promising small and medium-sized cities are provided with housing, and is advantageous from the point of view of the specialization of agricultural production.

It is also of no small importance that the location in this case of the enterprises of light and the food industries near places of the concentration of manpower resources facilitates their access to sources of raw materials, which in turn is a necessary prerequisite of the comprehensiveness of production and the creation of a closed technological cycle in the interconnected sectors of economic specialization.

General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet Comrade L. I. Brezhnev, while noting the increasing demands on manpower resources in connection with the acceleration of scientific and technical progress, emphasized that "already today the economic potential and the prospects of the development of the economy are being judged not only by mineral resources, energy resources and other customary yardsticks. Without underrating their role, it is possible to say with every reason that such indicators as the number and, of course, the level of training and the skills of workers, engineers and scientists are acquiring greater and greater importance."<sup>2</sup>

The training of skilled personnel from among the local population in the republics of Central Asia is one of the most practicable means of the increase of the mobility, the redistribution and the increase on this basis of the level of employment of manpower resources. That is why planning organs are consistently trying to see to it that here the rate and scale of the training of personnel would increase to the extent of the growth of their own population. Thus, for example, in 1980 the number of skilled workers graduated from vocational and technical schools increased as compared with 1975 in the Kirghiz SSR by 24 percent, the Tajik SSR--29 percent, the Uzbek SSR--54 percent and the Turkmen SSR--78 percent, while for the country as a whole it increased by only 10 percent.<sup>3</sup> A significantly higher rate of the training of workers at the vocational and technical schools of these republics as compared with the all-union rate is also called for in the plans of the 11th Five-Year Plan. At the same time, in the opinion of Deputy Chairman of the Tajik SSR Gosplan D. Karimov, Director of the Tajik Branch of the Scientific Research Institute of Labor L. Tumanov and others, the training of personnel is one of the greatest bottlenecks in the management of manpower resources, which requires the implementation of planned and long-term measures which are aimed at the considerable development of the entire system of education and vocational training. Suffice it to cite the following example. In 1978 in the Tajik SSR 65,100 people graduated from day secondary schools. In all 17,600 enrolled in higher and secondary specialized educational institutions, 14,700 enrolled in vocational and technical schools; 32,800 graduates got a job without having a specific occupation, or worked on the

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2. L. I. Brezhnev, "Leninskim kursom" [By the Leninist Course], Vol 2, Moscow, Politizdat, 1970, p 223.

3. IZVESTIYA AN SSSR, SERIYA EKONOMICHESKAYA, No 4, 1981, p 64.

private plot and were outside social production.<sup>4</sup> As a result of the incomplete coverage of young people by vocational types of education the number of people not having an occupation and level of skills, which are required for modern production, is still large. According to estimates for the region as a whole only 20-30 percent of the additional need for skilled workers for industry is being met by means of training at vocational and technical schools. Here it should be taken into account that a significant proportion of the graduates of vocational and technical school is intended for agriculture (the proportion of machine operators in their total number in the Central Asian republics is approximately 38-40 percent, which is 2.5-fold greater than in the RSFSR).

K. Muksayeva, chief of a sector of the Scientific Research Institute of Economics attached to the Uzbek SSR Gosplan, A. Dvoryadkina, chief of a sector of the Scientific Research Institute of Economics with the Computer Center of the Turkmen SSR Gosplan and others, who spoke at the conference, noted that for the republics of Central Asia such an aspect of the balance in the sphere of the training of personnel as the conformity of the potentials of the network of educational institutions to the quantitative growth of the contingents of young people, who are subject to vocational training, and first of all the development of the network of vocational and technical schools for the training of workers of industrial occupations, is now becoming especially topical.

Whereas in the case of the elimination of the existing differences in the scale of the training of skilled personnel with respect to the region the average union indicators served for a long time as the criterion of convergence and the outstripping of them by the Central Asian republics was able to serve as an indication of relative prosperity in this area, under the changed demographic conditions such an orientation is not longer adequate. The analysis of the development of the system of the training of personnel during the past 25 years against the background of the demographic movement with a breakdown by union republics attests that in spite of the outstripping for a long time of the average union growth rate of the graduating classes, for example, of workers from the system of vocational and technical education and the increase of the role of these republics in the reinforcement of the working class of the country the share of the Central Asian Region in the training of skilled workers still does not completely correspond to its share in the total number of young people.

Difficulties also still exist in the organization of the training of skilled workers in many occupations, the need for whom is negligible. Therefore, here it is necessary to overcome departmental isolation in the management of the financial resources intended for these purposes, which was noted in the report of I. Volokhin. When setting up education institutions which are called upon to meet the needs for skilled personnel for a group of enterprises of several republics, apparently, it makes sense to finance them on the principles of the matching participation of the interested parties. This will make it possible to approach more soundly the meeting of the need for the corresponding personnel on the part of the parties to the economic contract.

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4. Calculated according to the data of "Narodnoye khozyaystvo SSSR v 1980 g.: Statisticheskii yezhegodnik" [The USSR National Economy in 1980: A Statistical Yearbook], USSR Central Statistical Administration, Moscow, Finansy i statistika, 1981, p 375.

The expansion of the vocational education system directly in the Central Asian republics with allowance made for the peculiarities of the settlement of the local inhabitants and the prospects of the production development of individual regions is the main direction of the solution of the problem of training skilled personnel. At the same time it is necessary to emphasize that the decrease of the opportunity due to demographic reasons to train with leave from production the rapidly growing contingent of young people in the case of an inadequate growth rate of the nonagricultural sectors and the low territorial mobility of the population may turn out in the future to be a additional factor which complicates the problem of the efficient employment of the population. Therefore, for the solution of this problem in the set of organizational measures it seems expedient to send young people from the Central Asian Region to the vocational and technical schools of other republics (particularly the RSFSR), where frequently they remain undermanned. Apparently, the experience of the Tajik SSR, which in 1981 sent 1,860 boys and girls, who had graduated from the general educational school, for training to the vocational and technical schools of Gor'kovskaya, Yaroslavskaya and Tul'skaya Oblasts of the RSFSR, should be used more extensively in practice. The probationary work of the graduates of vocational and technical schools of the Central Asian republics, who have studied in other regions, at the leading enterprises at the place of training should also be organized.

Along with this it is necessary to solve the questions of the structural development of not only general and vocational and technical education, but also specialized education. In particular, this concerns the ratio in the training of specialists of the humanitarian and technical types. As compared with the RSFSR and the republics of the Baltic region, fewer specialists of the technical type, especially with a secondary education, are graduated here (whereas in the RSFSR and Estonia they account for more than half of all the employed specialists, in the republics of Central Asia they account for about one-third). Apparently, the need has come for the reorientation of the higher and the secondary specialized school toward the more intensive training of specialists of the technical type and not only for machine building and metalworking, but also for light and the food industries.

Today the plan of the training of workers and specialists with a breakdown by occupational and skills groups and accordingly the choice of the sites of new educational institutions, if they are absent at the sites of future capital construction, depend on where and what enterprises (workplaces) will be created tomorrow. Thus, for example, the combined organization of industrial production on the basis of the use of the output of agriculture also presumes the corresponding organization of the training of skilled personnel in industrial occupations of the broad type on the basis of vocational and technical schools directly in rural areas, the program at which can be restructured for the training of workers for light and the food industries. The need to set up new engineering and transportation supply lines will increase the need for the more extensive training of specialists of the technical type and of construction workers, since the realization of the idea of bringing industry closer to the manpower resources presumes the existence of a firm construction base.

New construction is the main means of increasing the employment of the population, but it requires some time. Therefore, steps should be taken on the more complete use of manpower resources at the industrial enterprises of the Central Asian republic, which are not adequately supplied with manpower, and on the increase of the

machine shift coefficient. The solution of this problem, which is especially urgent for large cities, requires first of all the acceleration of housing construction, the increase of the number of additional places at children's institutions and the more complete consideration of social factors, including ethnic factors.

The broadening of the work front in agriculture by the development of new areas for orchards, vineyards, melon and vegetables crops occupies a special place among the measures on the increase of the employment of the population in the republics of Central Asia. It should be noted that this capital-intensive means is justified first of all from the point of view of the maximum utilization of the favorable natural conditions. However, it does not harm to emphasize that it yields hardly anything from the standpoint of the "absorption" of the idle manpower resources of the countryside, since the mechanization of manual operations in agriculture leads to the freeing of manpower. Therefore, other methods must also be sought. In the future it seems promising, for example, to increase the employment of the population in services. For the unique climate of Central Asia is suitable for the creation of vacation centers for workers, sanatoriums, nursing homes, all-union health resorts and so forth.

Commuting, owing to which it is possible to shift, for example, construction and installation brigades for the service of points of the location of production, which are in the neighborhood of the base point, within a radius of feasible access of transportation, is called upon to play far from the last role in the set of measures on the coordination of the demand for manpower with its supply.

The vocational guidance of young people is an important link of the system of labor management, which makes it possible to coordinate the training of personnel with the location of productive forces and the improvement of the sectorial structure of the economy of the region. At present it should be aimed at changing the attitude of young people toward technical types of labor and first of all in industry and construction at the acquisition of working occupations and a secondary specialized education. In the republics of Central Asia, as, however, for the country as a whole, it should begin considerably earlier than with the ninth or tenth year of instruction at the general educational school and should bear in mind not only the students, but also their parents.

Thus, the increase of the mobility of the indigenous population of the republics of Central Asia as a complex socioeconomic problem also presumes the purposeful improvement of the way of life of the local population and of the social, everyday and demographic conditions connected with it. Its solution will promote the further convergence of the union republics in the nature of the employment of the population, the rationalization of its structure and the equalization of the socioeconomic levels of the national economy and will provide equal opportunities for meeting the needs of material and cultural development in all the regions of the country.

One of the main conclusions drawn at the conference was the assumption that the utmost assurance of the growth of labor productivity, which acts in one place as a factor of the reduction of the additional need of the national economy for manpower and in another as the basis of the increase of accumulations for the substantial broadening of the sphere of the application of labor, is a general demand on all territories, regardless of the specific nature of the demographic conditions.

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## LABOR

### EXPERTS PROPOSE BASING KOLKHOZ WAGES ON GROSS INCOME

Moscow SOTSIALISTICHESKIY TRUD in Russian No 3, Mar 82 pp 96-102

[Article by D. Kabanov, chairman of the Kolkhoz imeni Michurin of Moscow Oblast, Hero of Socialist Labor A. Shumskiy, chairman of the Kaz'minskiy Kolkhoz of Stavropol'skiy Kray, and A. Kamayeva, senior research associate of the Moscow Agricultural Academy imeni K. A. Timiryazev: "The Wage at Kolkhozes Subject to the Gross Income"]

[Text] The steady increase of the efficiency of agricultural production is the most important condition of the realization of the food program. The successful accomplishment of this task to a considerable extent depends on the further improvement of the systems of the moral and material stimulation of labor and the development of intrafarm accounting relations.

At the 26th CPSU Congress L. I. Brezhnev emphasized: "...A mandatory component of efficiency is the further improvement of the economic conditions of the operation of kolkhozes and sovkhozes. The success of all plans and all programs depends on the attitude toward the matter, on the conscientious work of rural workers and, hence, on the system of moral and material stimulation."

The use of the gross income by way of an experiment<sup>1</sup> as the criterion of the evaluation of the labor of collectives of production subdivisions, the managers and specialists of kolkhozes also serves these goals. Its use is based on the fact that the formation of the wage fund at kolkhozes is determined by the peculiarities of the cooperative form of ownership, in case of which the level of the wage and public consumption funds depends on the amount of income of each farm. The newly created value is the economic base which ensures here expanded reproduction and the increase of the material well-being of the kolkhoz farmers. The use of this indicator strengthens the connection of the wage with the end results of production.

The comparison of the wage fund with the gross income of the kolkhoz is the basis for the system of the material stimulation of the labor of workers according to the end results of production, which was elaborated by staff members of the Moscow Agricultural Academy imeni K. A. Timiryazev. The main principles of the system are the following.

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1. Such a wage system has been used for a number of years at six kolkhozes of Moscow Oblast and three kolkhozes of Stavropol'skiy Kray.

The wage fund of the individual production subdivisions is determined according to the norms of deductions from the gross income with a breakdown by agricultural crops and types of products of animal husbandry. Here the standard net income is calculated as the difference between the value of the output and the material and monetary expenditures on its production. The norms of the deductions are determined (in percent) in accordance with the proportion of the wages in the gross income, which actually formed during the 3-5 years preceding the year of the establishment of the standards. In the case of identical natural, economic and technological conditions of production the norms of the deductions for wages in plant growing are calculated not by subdivisions, but for the farm as a whole. An example of the calculation of the norms of deductions is cited with respect to the Kolkhoz imeni Michurin for 1978 (Table 1).

Table 1

Indicators	Unit of measurement	Dairy farms		Cereal crops (for farm as a whole)	
		Babenki	Gorodkovo	winter	spring
Value of gross output with allowance made for quality. . .	thousands of rubles	234.7	194.2	250.1	443.8
Direct material expenditures. . . . .	thousands of rubles	136.1	113.3	128.5	261.5
Gross income. . . . .	thousands of rubles	98.6	80.9	121.6	182.3
Wages in direct expenditures. . . . .	thousands of rubles	36.7	41.8	7.6	30.2
Norm of deductions. .	percent	37.2	51.7	6.2	16.6

When determining the norms of the deductions for wages from the gross income and in the calculations of the bonus of kolkhoz farmers the agricultural output with allowance made for its quality is evaluated according to prices which have been constant over all the years. The markups on the state purchase prices for the output sold in excess of the plan are not taken into account here.

The norms of the deductions, which have been established in this way, remain stable for a number of years. But they can be revised in connection with a change of the purchase prices for agricultural output, the wage rates and other economic conditions. The norms may also be adjusted in accordance with the coefficient of the ratio of the growth rates of the wage and labor productivity. This is done for the purpose of ensuring a leading growth rate of labor productivity as compared with the wages.

Using the example of the Sudislovo Dairy Farm of the Kolkhoz imeni Michurin it is possible to show the adjustment of the norm of the deduction for wages from the gross income in accordance with the coefficient of the ratio of the growth rates of labor productivity and the wage with respect to individual types of output. On the average during the 3 preceding years (1977-1979) the gross income for the farm was 137,600 rubles. For 1980 it was planned to obtain 146,200 rubles. The norm of the deduction for wages from the gross income in the plan was 35.9 percent. But taking into account that in the cost accounting plan assignment for this farm (the only one at the kolkhoz) there was no leading of the growth of labor productivity as compared with the wages, it was necessary to change the norm of the deduction in

accordance with the coefficient of the ratio, which had formed on the average with respect to dairy cattle breeding and is equal to 0.9. As a result the norm of the deduction for wages was decreased to 32.3 percent ( $35.9 \times 0.9$ ), which made it possible to envisage in the plan the leading growth of labor productivity.

The total (lump) wage fund of the individual production subdivision is determined according to the norms of deduction, which have been established at the kolkhoz. It is calculated cumulatively according to the types of output and includes the guaranteed (for the amount of performed work and other guaranteed payments) and the bonus wage. The guaranteed payment during the year can be made according to piece rate estimates for the amount of performed work or on a time basis--for the worked time. The bonus payment is calculated in accordance with the results of the year as the difference between the lump fund and the guaranteed wage and is paid per earned ruble for each subdivision regardless of the overall economic indicators for the kolkhoz as a whole.

The bonuses and additional payments, which were stipulated by the wage system previously in effect (the additional payment for output according to the established estimates, the additional payment for the high quality and timely performance of the most important operations, bonuses for the above-plan output or for the exceeding of the achieved level of its production, for the increase of the productivity and the more complete conservation of the animals being cared for during the periods of wintering, for the economy of direct expenditures and others), are taken into account in the case of the calculations of the norms of the deductions and, consequently, are included in the bonus portion of the lump wage fund. Thus, in conformity with the new conditions of material stimulation the lump wage fund of kolkhoz farmers not only consists, unlike the generally accepted practice, of the payment for the performed amount of work, but also includes over and above the rate the bonus payment.

For the purposes of increasing the effectiveness of the material stimulation of the labor of kolkhoz farmers the additional payment for the quality of work in plant growing, the lengthening of the service life of equipment, the boosting of productivity, the more complete conservation of the livestock and poultry being cared for, the increase of the yield of young animals and the increase of the quality of livestock products is assigned to the category "the bonus wage." The bonuses in this case are paid in a lump sum at the end of the year, which ensures the closer connection of the wage with the end results of production.

The reduction of all kinds of additional payments and bonuses from the wage fund, which are paid during the year, not only increases the material interest of the kolkhoz farmers in the end results of their labor, but also makes it possible to plan more precisely the bonus wage fund. Whereas in the case of the prevailing systems of material stimulation the individual types of additional payments and bonuses are not planned at all or are stipulated in the plans very approximately (for example, the bonuses for the above-plan output or the exceeding of the achieved level of the production of output, the additional payment for the high quality and timely performance of the most important field work and others), in the case of the new system the bonus portion of the wage is determined when planning in the full amount as a component of the lump fund, the comparability of the planned and the actual wage funds in the case of the planning and analysis of the labor expenditures is ensured.

An example of the calculation of the wage funds (planned and actual) is cited for Dairy Farm No 2 of the Kaz'minskiy Kolkhoz (Table 2).

Table 2

Indicators	Unit of measurement	1980, actual	1981, plan*	Plan as a percent of reality
Value of gross output (with allowance made for quality). . .	thousands of rubles	574.8	645.2	112.2
Direct material expenditures . .	thousands of rubles	228.0	279.4	122.5
Gross income . . . . .	thousands of rubles	346.8	365.8	105.5
Norm of deductions for wages from gross income. . . . .	percent	52.1	52.1	--
Lump wage fund . . . . .	thousands of rubles	180.7	190.6	105.5
including:				
guaranteed wage. . . . .		134.6	130.2	96.7
bonus payment. . . . .		46.1	60.4	131.0
Bonus payment per ruble of guaranteed wage. . . . .	kopecks	34.2	46.4	135.7

\* The plan at the level of the socialist obligations assumed by the farm collective.

As is evident from the table, the amount of the bonus wage for the year under review and for the period being planned is determined by the same method. In the case of a constant norm of deductions the lump wage fund increases in conformity with the increase of the gross income. The bonus payment is specified in the planned expenditures not only by the total amount, but also per ruble of the guaranteed wage, which increases considerably the mobilizing role of the cost accounting assignment.

The method of planning the wage fund according to the norms of deductions from the gross income increases the material interest of the kolkhoz farmers in the drafting of stepped-up production plans.

In conformity with the stated principles the organization of the wages of kolkhoz farmers in the case of the new system of material stimulation assumes simpler and more precise forms.

The new system of the material stimulation of labor also includes new conditions of the payment of bonuses to the managers and specialists of the top and middle levels of management. The bonuses for the increase (or the maintenance) of the level of the production of the gross output and labor productivity, which was achieved on the average during the preceding 3 years, are paid in the following amounts:

up to 3 percent of the annual salary for each percent increase of the volume of the gross output (in value terms), but not more than the salaries for 2 months;

up to 5 percent of the annual salary for each percent increase of labor productivity (gross income per man-hour), but not more than the salaries for 3 months.



The average level of the production of gross output and labor productivity, which is established for the determination of the bonuses and is calculated during the first year of the use of the system, should not be decreased during the following year. It is either increased in conformity with the level of the year under review (according to the principle of progressiveness) or remains the same.

The indicator of labor productivity, which was calculated according to the gross income, is being used for the first time as an estimation of the result of the work of managers and specialists.

The bonuses for the managers and specialists of the production subdivisions (brigades, complexes, farms), as well as of ancillary works (repair workshops, motor vehicle garages and others) are added to their salaries on the basis of the formed average bonus wage of the kolkhoz farmers per ruble of the guaranteed wage. The use of identical criteria of the evaluation of the labor of kolkhoz farmers, managers and specialists in this case is an important condition of the increase of the effectiveness of the systems of material stimulation.

One of the participants in the experiment is the Kolkhoz imeni I. V. Michurin. According to the indicators of the cost effectiveness of agricultural production it holds a leading place among the farms of Shakhovskiy Rayon of Moscow Oblast. The kolkhoz has 6,013 hectares of farmlands, including 4,923 hectares of arable land, and about 2,000 cows, which are housed at 9 dairy farms. It specializes in the production of milk, cereal crops and potatoes. The system of wages for the derived gross income has been used here since 1977. In spite of inclement weather conditions, labor productivity during 1977-1979 as compared with the preceding 3-year period increased by 11.9 percent, having exceeded the growth rate of wages by 4.5 percent. With the increase of the wages of all categories of workers the expenditures per ruble of gross output decreased during this period by 1.9 kopecks, as a result the economic impact from the adoption of the new wage system in average annual terms for the kolkhoz was 50,000 rubles (Table 3).

The livestock breeders of the kolkhoz achieved significant gains. The average annual milk yield per cow in 1979 was 3,408 kg, which is 616 kg more than the average rayon level, while 3,600 kg of milk per cow were obtained at the Gorodkovo Farm, which N. M. Tsapalkina manages. Even in 1980, which was extremely unfavorable with respect to weather conditions, the milk yield per cow at this farm was 3,476 kg, or 800 kg more than on the average for the farms of the rayon, and at a lower production cost. The kolkhoz was the first in the rayon to change over to the progressive link system of the housing of cows.

The use of the new forms of the organization of labor and wages in animal husbandry of the Kolkhoz imeni Michurin ensured an increase of the efficiency of management. Labor productivity in this sector increased on the average by 21.6 percent, while at the farms with the link system it increased by 28 percent. The production cost of a quintal of milk was reduced by more than 1 ruble. The average monthly wage of milkmaids increased from 170 to 198 rubles.

At the Kaz'minskiy Kolkhoz of Stavropol'skiy Kray the system of the material stimulation of labor subject to the gross income is being used under the conditions of advanced methods of the management of agriculture. A new system of the organization of production on the basis of the shop structure of management and integrated

crop rotations has been introduced here. Starting in 1977 one field crop rotation and one fodder crop rotation were assimilated instead of more than 80 fields. With their consolidation the structure of the management of production was also reorganized. In place of the previously existing five multiple-skill brigades and other small production subdivisions five shops were set up: plant growing, animal husbandry, mechanization, construction and transportation, as well as a marketing and supply department.

Table 3

Indicators	Unit of measurement	Moscow Oblast	Stavropol'- skiy Kray
		Kolkhoz imeni Michurin of Shakhovskiy Rayon	Kaz'minskiy Kolkhoz of Kochubeyevskiy Rayon
Wages spent in agricultural production per ruble of gross output during period preceding introduction of new wage conditions (on the average for 1974-1976). . .	kopecks	46.8	33.1
The same, during period of experiment (on the average for 1977-1979). . . . .	kopecks	44.9	32.2
Actual expenditures on wages during period of experiment (on the average for 1977-1979). . . . .	thousands of rubles	1176	2395
Wage fund consumed on the average in 1977-1979 given the level of its outlays during preceding period . .	thousands of rubles	1226	2461
Average annual economic impact. . . . .	thousands of rubles	50	66
Labor productivity--gross output per man-hour (on the average in a year):			
1974-1976 . . . . .	rubles	2.02	2.68
1977-1979 . . . . .	rubles	2.26	3.35
Pay for 1 man-hour (on the average in a year):			
1974-1976 . . . . .	rubles	0.94	0.89
1977-1979 . . . . .	rubles	1.01	1.08
Coefficient of ratio of growth rates of wages and labor productivity. . . . .		0.62	0.85

In development of the Ipatovo experience of the efficient use of equipment not temporary, but permanent complexes for the production of individual types of agricultural output in a closed cycle were created in the plant growing shop. The machine

operators take part in the cultivation of the crops, beginning with the presowing tilling of the soil and ending with the harvesting, as well as ensure the laying in and storage of seed for the crop of the next year. Agricultural equipment is permanently attached to each complex, while the plowland is attached for 1 year. Thus, the complex, which has specialized in the cultivation of specific crops, annually moves through the integrated crop rotation.

In all five specialized complexes for the cultivation of a single or two to three crops have been set up in the plant growing shop. With such specialization and concentration of production the calculations of the bonus wage in accordance with the new system of material stimulation are simplified considerably. For example, output from an area of 1,500 hectares worth 2.39 million rubles was obtained in 1980 by the collective of the complex for the cultivation of sugar beets, which is headed by agronomist A. I. Semenov, while the material expenditures were 640,000 rubles. The gross income as the difference between these amounts is equal to 1.75 million rubles. The norm of the deduction from the gross income for the wages of machine operators is 5.9 percent. Hence the lump fund was 103,000 rubles. During the year 76,000 rubles were spend from this fund, while the remaining 37,000 rubles were paid at the rate of 48 kopecks per earned ruble.

Similar calculations were made for all the mechanized complexes and farms of animal husbandry. The bonus payment for the end results of work in 1980 for these subdivision was from 11 to 55 kopecks per ruble of guaranteed wages.

The changeover of the kolkhoz to the new methods of the material stimulation of labor was conducive to the strengthening of internal cost accounting. The adoption of the lump sum plus bonus wage system for the end results of production made the increase of the wages of the kolkhoz farmers dependent on the increase of the gross income of the sectors. This mobilizes people not only for the increase of output, but also for the utmost economy of expenditures and increases both the collective and the personal responsibility for the end results of production activity.

With the introduction of the sectorial structure of production management the number of workers of the staff and service personnel was decreased at the kolkhoz by 17 people with an annual wage fund of 20,500 rubles. The workload on the chief specialist according to the number of management problems being solved decreased to one-third to one-half, while the number of subordinates was reduced to one-fourth to one-third (to 5-7 people). Management became more skilled, flexible, efficient and comprehensive. The role of specialists as production organizers was greatly enhanced. The operation-by-operation division of the labor of performers was introduced in practice. With such organization of management the kolkhoz chairman, who is relieved from "chores," also has an opportunity to concentrate more attention on decisive, long-range questions--the planning of the further development of the farm, the strengthening of the contacts with science, the management of the main agricultural campaigns, the selection, registration and placement of personnel.

And there is another innovation in the organization of production. In 1980 an extensive experiment on the cooperation of the means of mechanization was begun in Stavropol'skiy Kray. Interfarm associations for the mechanization of agricultural production were created on the basis of the rayon associations of Sel'khoztekhnika. All the machine operators of the kolkhozes and sovkhozes, the repair and trade services of Sel'khoztekhnika and its maintenance system were included in it. This

made it possible to combine the efforts of the kolkhoz and sovkhos machine operators and the workers of Sel'khoztekhnika, who are now also morally and materially responsible for the harvest and for the end result. The prevailing system of material stimulation also proved to be effective in the case of financial interrelations with the machine operators who had been transferred to the staff of the rayon inter-farm enterprise.

The use of the new methods of the organization of labor and wages along with high standards of farming ensured an increase of the volume of output at the kolkhoz on the basis of the increase of the yield of crops and the productivity of agricultural animals (Table 4). The labor productivity (the gross output per worked man-hour) increased from 2.68 to 3.35 rubles, or 25 percent, with an increase of the wage per man-hour from 0.89 to 1.08 rubles, or 21.3 percent. Thus, the growth rate of labor productivity is greater than the growth rate of wages.

Table 4

Crops, indicators of productivity of agricultural animals	Unit of measurement	Average a year		1980
		1971-1975	1976-1980	
Winter wheat. . . . .	quintals/hectare	25.6	37.9	42.6
Grain corn. . . . .	quintals/hectare	20.2	26.6	26.8
Sunflowers. . . . .	quintals/hectare	14.8	15.4	25.7
Sugar beets . . . . .	quintals/hectare	241.2	409.0	430.0
Milk yield per feed cow .	kg	1960	2300	2427
Average daily weight gain of large-horned cattle. .	g	357	370	378
Clip of wool per sheep. .	kg	4.0	4.1	4.2

In accordance with the results of 1980 and the 10th Five-Year Plan as a whole the Kaz'minskiy Kolkhoz was awarded the Challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee and the memorial badge "For Great Work Efficiency During the 10th Five-Year Plan" with entry on the All-Union Honor Roll at the Exhibition of USSR National Economic Achievements. The new system of the organization and management of production, which is used at the kolkhoz, was approved by the Collegium of the RSFSR Ministry of Agriculture and the Presidium of the RSFSR Council of Ministers and is being successfully assimilated by many followers in Stavropol' and in other areas. In 1981 a kray school of advanced know-how for specialists of the top level of management of kolkhozes, sovkhoses and rayon production administrations of agriculture was organized at the kolkhoz for the purpose of its more extensive dissemination.

The gains made by the Kolkhoz imeni Michurin of Moscow Oblast and the Kaz'minskiy Kolkhoz of Stavropol'skiy Kray make it possible to draw the conclusion that the system of the material stimulation of the labor of kolkhoz farmers subject to the gross income has along with other factors a positive influence on the increase of the efficiency of agricultural production and the improvement of the quality of labor.

In conclusion it should be noted that the extensive use of the system of the material stimulation of labor in accordance with this indicator in many ways depends on

the initiative of the workers of the union and republic ministries of agriculture. The kolkhozes using this system need the assistance of the rayon and oblast production administrations of agriculture. It is impossible to allow the individual provisions of this wage system to be changed arbitrarily, which would lead to the decrease of its effectiveness.

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## LABOR

### NEW LABOR SKILLS NEEDED IN CONSUMER TRADE NETWORK

Moscow SOTSIALISTICHESKIY TRUD in Russian No 3, Mar 82 pp 26-34

[Article by V. Shalyapina, chief of a sector of the USSR State Committee for Labor and Social Problems, and L. Staferova, chief of a division of the All-Union Scientific Methods Center for the Organization of Labor and Production Management: "Brigades of a New Type at Trade Enterprises"]

[Text] Scientific and technical progress and the more and more extensive adoption of advanced methods of self-service in trade dictated the need to improve the division and cooperation of labor and first of all to develop the brigade forms of its organization and wages. The task set by the party to transform this form during the 11th Five-Year Plan into the main form also pertains to our sector. It is prompting us to approach in a new way the evaluation of the activity of existing brigades and to enlarge the sphere of their use with allowance made for advanced know-how and the specific nature of the sector. In this connection the practice of the work of those enterprises of trade and public dining, in which brigades operate, was studied by the All-Union Scientific Methods Center for the Organization of Labor and Production Management of the USSR State Committee for Labor and Social Problems jointly with sectorial republic centers (laboratories) of the scientific organization of labor.

As the studies showed, the brigade organization of labor is most prevalent in the sections of customer service and unites the workers of the selling floor--the salespeople and the checker-cashiers. Of them 62.3 percent are included in brigades, while only 13.4 percent of the loaders are. In the majority of instances the auxiliary personnel, on the level of the organization of whose labor the efficiency of the work on the selling floor also depends, work individually.

The types of brigades in trade are governed by the peculiarities of the organization of labor in the different sections of the technological trade process, which are connected with the specialization of the enterprises, the volume of the commodity turnover, the number of customers and the degree of readiness of the goods for sale. Specialized shift brigades are formed in the sections with uniform flows of customers, in which the amount of performed work ensures a sufficiently full workload of the salespeople, the checker-cashiers, the packers and the loaders during the shift, while the end results in practice depend entirely on the entire collective. The creation of specialized brigades under these conditions is also dictated by the need to exempt the mass categories of workers from the performance of

functions not characteristic of them. They are most prevalent in nonfood stores and unite there more than 80 percent of the total number of workers.

Multiple-skill shift brigades have been formed in the sections, in which the flow of customers fluctuates, the amount and nature of the work being performed do not make it possible to give each worker a uniform workload, while the end results of labor depend on the coordinated actions of all the members of the brigade. Thus, they are used extensively at food stores.

At enterprises for trade in nonfood consumer items the numerical composition of the specialized brigades fluctuates from 5 to 11 people, multiple-skill brigades--from 15 to 40 people, while in food stores the size of the latter exceeds 30 people, and at times even comes to 100 at large self-service stores, department stores and from 30 to 60 people at stores equated with them. In those instances when there is a division into departments and sections, the multiple-skill brigades are formed from workers of these subdivisions.

/The delivery of goods to the store and its selling floor is one of the labor-consuming elements of the technological trade process/ [in boldface]. It includes the materials handling and warehouse operations, the intrawarehouse and intrastore moving of goods, their placement in stacks and on shelves and laying out on trade equipment. According to the data of the USSR Ministry of Trade, the amount of materials handling, transportation and warehousing operations in the sector comes to approximately 1.5 billion tons a year. In spite of the increase of the technical equipment of enterprises, which was outlined in the 10th Five-Year Plan, the level of mechanization here at present does not exceed 10 percent and the idle times of transport for loading and unloading are great. As a result, the number of workers employed in these processes, which now comes to more than 1 million and with the formed growth rate of the commodity turnover may double by 1990, is increasing.

In order to overcome the established trend, it is expedient to disseminate more extensively the know-how of advanced enterprises. Thus, the practice of the operation of stores, at which the loaders are united in brigades, was studied. At the Moscow Detskiy mir Department Store prior to the creation of brigades the goods were delivered to the selling floors on the basis of uncoordinated orders of departments and sections. They were transported "in bulk" in body trucks or freight trolleybuses, which resulted in considerable expenditures of labor and time and lengthy layovers of transport for loading and unloading operations. The increase of the number of loaders did not solve the problem of the timely delivery of goods to the workplaces of the salespeople, since with the increase of the amount of goods being supplied more time was required for recounting, repeated intermediate transfers and warehousing.

In striving to overcome these shortcomings, at the department store they created a specialized brigade of loaders with the functional division of labor among its links in conformity with the technological process of the movement of goods. The first link unloads the motor transport, the second delivers the containers with the cargo to the selling floors, while the third delivers them from the selling floors to the loading platform, the fourth unloads the containers and loads them onto trucks at the warehouse. The division of labor according to the commodity and the functional attributes has been adopted in the brigade. The delivery of the containers with goods to the section is strictly attached to specific links. Such

a limitation of the range of duties of the loaders is due to their responsibility for the safe keeping of commodity stocks during their delivery from the unloading platform to the section. In the section for the unloading and loading of trucks one link works on lift trucks, while the other delivers the empty containers from the selling floor to the loading platform. As a result of the introduction of such an organization of the labor of loaders at the Detskiy mir Department Store their number was decreased by more than one-half.

At the same time, as the study showed, the specialized brigade of loaders, which performs all the operations from the unloading of goods from the truck of the supplier to their delivery to the selling floor, as is done at the State Department Store, is more ideal. The extensive cooperation of labor in such a brigade results from the technology of the movement of goods, which covers the entire set of loading and unloading operations. In this case there are more opportunities to utilize the internal reserves of the increase of labor efficiency by means of the efficient spending of working time, the division and cooperation of labor within the brigade. The responsibility of the brigade for the assurance of coordinated actions at all the stages of the technological process of the movement of goods and of the members of the brigade for their timely delivery to the trade sections is increased.

Moreover, objective conditions for the mastering of the related occupations of loader and battery-powered truck operator, which is conducive to the increase of the skills of personnel, are created when performing various materials handling and transportation operations, while labor itself becomes more meaningful and appealing. The widespread combining of occupations (100 percent of the number of loaders) and interchangeability decrease significantly the intrashift losses of working time and the idle times of motor transport and make it possible to perform large amounts of materials handling with a smaller number of people than the standard number.

The reserves of the economy of living labor by the adoption of advanced labor standards are revealed more rapidly and completely in the case of brigade organization. At the Detskiy mir Department Store, for example, intersectorial output norms for materials handling are in effect. Since the brigade of loaders is a unified collective which unites people of approximately the same skill, who are associated by common interests, the need for operation-by-operation norms disappeared. Consolidated comprehensive norms for the brigade were elaborated in place of them. The possible additional transfers of freight, which may be required depending on the flow chart of the delivery of goods, were taken into account here.

At the department store not only are the results of the labor of the brigade of loaders evaluated on the basis of the consolidated comprehensive norms; the brigade production plans (assignments) are also drawn up on their basis. They are used in combination with measures of material stimulation for the fulfillment and exceeding of the plan of the commodity turnover, which makes it possible to reveal and to put to use the additional reserves of the economy of manpower and material resources. At the Detskiy mir Department Store and the State Department Store, where the labor in the brigades of loaders is standardized according to the consolidated comprehensive norms, the level of the marketing costs with respect to transportation is two-fifths to one-half as great as at the other surveyed enterprises.

The experience of the enterprises, at which economical configurations of the freight traffic are elaborated when creating brigades of loaders, is of interest. This



helps not only to determine a more efficient means of the movement of goods from the truck to the workplaces of the salespeople, but also to calculate the frequency of their delivery and removal of packaging materials, to break down the total amount of goods being delivered by groups, to increase the degree of the loading of means of mechanization and to substantiate the need for them. Such experience has been gained, for example, at the enterprises of the Khar'kov City Trade Administration.

When working out an economical configuration of the delivery of goods at Store No 25 of the Khar'hov Gastronom Trade Organization it was envisaged wherever possible to eliminate the intersection of the flows of customers with the flows of freight, to shorten the routes of the movement of goods, to mechanize materials handling and transportation operations and to put into effect a schedule of the delivery of goods and the removal of packaging materials. As a result of the implementation of these measures the level of the mechanization of the labor of the loaders increased to 35 percent, the mechanized means of the movement of goods were increased 10-fold, the time for unloading motor transport was shortened by 40 percent, the number of transfers of goods was decreased, 9 loaders were released with an increase of the volume of the commodity turnover by nearly twofold. The system of planned preventive commodity supply and the replenishment of reserve commodity stocks, which is in effect at the Vinnitsa Department Store, also merits attention.<sup>1</sup>

Thus, as advanced know-how attests, brigade organization makes it possible to increase significantly the labor productivity of loaders and to decrease the need for manpower in one of the labor-consuming sections.

/Another important element of the technological trade process is the preparation of goods for selling/ [in boldface]. It is of particular importance under the conditions of the use of the self-service method, when the quality of trade service in many ways depends on the efficiency of the organization of labor in this section. A sample survey shows that in the total number of workers of self-service stores more than 17 percent are packers. According to the data of the USSR Ministry of Trade, there are 31,900 of them. Moreover, other workers--salespeople, checker-cashiers--are enlisted in the performance of operations connected with packaging. As a whole according to the materials of the Ukrainian Scientific Research Institute of Trade and Public Dining, more than 180,000 people are employed in the packaging of goods in the system of the USSR Ministry of Trade.

In this connection the task is arising to improve the organization of labor in the packaging of goods and to exempt the personnel of the selling floor from the performance of uncharacteristic functions. The practice of the work of the packaging sections at enterprises (department stores), trade organizations and trade administrations was studied. The experience of setting up such a section at Self-Service Department Store No 5 of the Main Administration of Trade of the Moscow City Soviet Executive Committee is of interest for food stores like the self-service department store. A commission made up of representatives of the administration, the trade union committee and the economic services, which explains the essence and importance of collective forms of labor, organizes the vocational and economic education of the personnel, analyzes the main economic indicators of the

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1. For more detail see the article of V. Shalyapina and L. Staferova, SOTSIALISTICHESKIY TRUD, No 7, 1981.

activity of the enterprise, the level of the organization of labor, the results of the use of the collective piece-rate wage and so on, has been set up here.

The changeover to the brigade form was carried out at the store in stages: first individual piecework was introduced, then, upon fulfillment of the established norms by the majority of workers, specialized brigades of packagers were created. They were made up with allowance made for the specialization of the departments of the self-service department store (meat-fish, delicatessen, vegetables-fruit and so on), as well as the level of the vocational training of the workers. The increase of occupational skill in the brigades is ensured by the fact that every packager takes sectorial month-long courses of the improvement of skills. When new members are taken on in the brigade, they are trained at the school of trade apprenticeship of the enterprise for 2-3 months. The deputy chiefs of the departments perform the functions of the brigade leader. They plan the organization of the work in the brigade, keep a record of the amount performed, draw up the schedules which regulate the activity of the members of the primary collective and monitor the condition of the technological equipment and the observance of labor safety regulations.

Organizational and technical measures, which ensure the cooperation of the primary collectives in the labor process with allowance made for the changes in its content, are of great importance in the preparation for the changeover to the brigade form. Interbrigade cooperation, when the packagers of some departments, depending on the amount of work being performed, are enlisted to help others, is envisaged for this purpose at the self-service department store. Their workplaces have been replanned so that they would be located in the area of the storage of the goods and on the selling floor, and are organized in conformity with the model plan for the food packaging shops, which has been approved by the USSR Ministry of Trade. Owing to the efficient location of the stock in trade and the goods being packaged, the expenditures of time and energy on searching for them have been reduced and the transfers and extra movements have been decreased.

The specialization of workplaces and operations also presumes the intrabrigade cooperation of labor, which finds expression in the efficient placing of the members of the primary collective at workplaces and the interconnected performance of the technological operations on the preparation of goods for selling. During the hours of heavy flows of customers for the replenishment of the amount of goods on the selling floor the members of the brigade engage in laying them out, which makes it possible to use the working time of the salespeople more completely for the active service of customers. Collective material interest, the extensive combination of occupations and functions and the improvement of the organization of labor in the brigade were conducive to the increase of labor productivity among the packagers by 20-25 percent, the number of workers decreased in this case by 14 percent.

At the same time, as the study showed, the greatest economic impact is achieved in the case of the creation of centralized packaging shops, to which the experience of the Klaypeda Trade Administration attests. Here the commodity attribute was the basis for specialization: brigades for the packaging of grocery, confectionary and delicatessen items and vegetables were formed. This dictated the need to elaborate measures on the improvement of the organization of labor in all the links of the technological process of packaging. The workplaces of the packagers are equipped with semi-automatic scales. In order to improve the service of the workplaces, they are located on a single flow line with stocks of "raw materials," on the one

hand, and packaged goods, on the other. The cargo is delivered by electric lift trucks from the warehouse of "raw materials" to the shop and from the shop to the warehouse of finished products. The packaged products are delivered via a system of conveyors to staplers, which staple up the packages, then they are sent by belt conveyors to the place where they are put into the packing machine.

Mechanized and automated lines, on which the goods are sorted, cleaned, washed, packaged and put into a container, have been installed for the packaging of vegetables, potatoes and fruit. Electronic weighing units with bill-printing attachments make it possible to shorten as much as possible the time for labeling, and this is also convenient for the customers--a label with an indicator of the price, weight and cost of the item is enclosed in each package.

In the brigade the working time and equipment are being used efficiently, the meaningfulness of labor is increasing. As a result, the amount of packaging work per worker has increased fourfold as compared with the individual organization of labor, the need for packaging workers for the administration as a whole has decreased to less than one-fifth, the cost of packaging operations has been reduced to five-elevenths. The quality of the packaging and the appearance of the packaged products have become significantly better, the consumption of packaging materials has been cut in half.

Standard norms of time (output) for the wages of packagers, on the basis of which the labor of 81.5 percent of this category of personnel is being standardized (on the average for the sector it is 53 percent), are used in the surveyed brigades. Thus, the introduction of the brigade organization of labor to a significant extent promotes the assimilation of advanced labor standards and makes it possible to ensure the optimum ratio of the growth rates of labor productivity and wages. At the majority of surveyed stores the output on the average increased by 30-33 percent with an increase of wages by 20-25 percent, which made it possible to package the necessary amount of goods with fewer people and to stabilize the staffs of packagers.

We came to the conclusion that for the improvement of the organization of labor in the preparation of goods for selling it is expedient for enterprises like the "self-service department store" and stores on the same level as them to use the know-how of Moscow Self-Service Department Store No 5, where specialized brigades of packagers have been formed according to the technological attribute. For trade administrations, which carry out the centralized packaging of goods, it is possible to recommend the experience of the Klaypeda Administration, where the commodity attribute was the basis for the creation of brigades.

/The direct service of customers, which the workers of the selling floor organize, is the most important part of the technological trade process/ [in boldface]. This is the largest category of personnel, which constitutes about 59 percent of the total number of workers in the sector. Their labor in most instances is organized on a collective basis. Interesting experience in forming brigades has been gained at the Vinnitsa Department Store of the Ukrainian SSR Ministry of Trade, which has already been related in the pages of the journal, and at other enterprises of the sector.

As the study showed, at medium-sized trade enterprises with a commodity turnover of 2-7 million rubles a year and erratic flows of customers it is advisable to set

up consolidated multiple-skill brigades, which makes it possible to efficiently use the working time and sales areas and to ensure the combination of personal and collective interest in the end results. In particular, the experience of forming multiple-skill brigades on the basis of two or more sections merits attention. Thus, at Gorizont Store No 15 of the Yaroslavl' City Industrial Goods Trade Organization there used to be three sections with separate plans of the commodity turnover. Due to the lack of production technology relations between the brigades it was not possible to achieve their cooperation and coordination. Then on the basis of the data of a study of the flows of customers the brigades of three commodity departments were united into a single multiple-skill brigade. The technological rearrangement of the selling floor was carried out, a unified checkout area was introduced, two checkout lanes, one of which is an express lane, were set up instead of three. All this made it possible if necessary to transfer workers to those sections of the technological trade process, where this is necessary for ensuring a high quality of service. The cooperation of labor in this case required that the workers master related occupations, specialties and functions. The total number of people knowing related occupations and functions here comes to more than 80 percent. Common interest and collective responsibility for the fulfillment of the plan were ensured with the creation of the multiple-skill brigade.

And here is the result: by means of the improvement of the management of the brigade the number of workers was reduced by 10 percent, two chiefs and one deputy chief of sections (the highest paid categories of workers) were released, which made it possible to decrease considerably the marketing costs. Labor productivity increased by 28 percent with a significant decrease of the time for service. By means of the use of the additional (intersectional) space the display area factor was increased to 79.3 percent with a standard of 75 percent, which made it possible to place on the selling floor more than 70 percent of all the reserve commodity stocks of the store and to decrease the expenditures of time on their replenishment during the shift. The commodity turnover per square meter of sales area increased by more than 20 percent.

/One of the most important, concluding elements of the technological trade process, which determines the capacity of the enterprise, is the settlement of accounts with customers for the selected goods/ [in boldface]. The checkout counter accounts for about 40 percent of the total labor operations connected with the sale of a commodity. The labor of the checker-cashier, as we all are well aware, is characterized by a great neuropsychological strain. The basic task in improving its organization consists in ensuring a high rate of performance of the labor operations, the efficiency of the recording and monitoring of the safe keeping of commodity stocks on the selling floor.

So that the checkout counter would not decrease the capacity of the enterprise and the efficiency of the entire technological trade process, especially under the conditions of self-service, at enterprises with a constant heavy flow of customers, when the checker-cashiers are busy practically all the working time with the performance of basic functions, the brigade organization of the labor of workers of this category (specialized brigades) is used. It is most effective in the case of the consolidation of departments (sections), the decrease of their number and the creation of a single checkout area.

The experience of the Chernigov Druzhba Shopping Center is an example of the further development of the brigade form of the organization of labor. A single check-out area operates here. The brigade serving it includes a cashier and a checker-bagger. A special cashier's office has been set aside for paying for large items (washing machines and so forth). The cashier transfers the information from the tags of the goods to the keyboard of the cash register and gives out the change, while the bagger receives the bill, checks the correctness of the payment and bags the purchase. Thus, the cashier when settling with customers does not deal with the goods and, hence, he need not constantly shift his attention from the purchase to the cash register, which prevents the possibility of errors. Owing to this the physical strain, which arises in the case of the traditional individual organization, is reduced significantly.

As a result of the introduction of the brigade organization of the labor of the checker-cashiers the quality of trade service at the department store became much higher and the main indicators of the operation of the store improved: the total saving of the time spent by customers was 20,100 hr, the commodity turnover increased by 6.8 percent, and 94.6 percent of its increase was obtained due to labor productivity.

Moreover, an increase of the productivity of each member of the brigade is ensured owing to the high level of the division and cooperation of labor, and therefore there is no need to introduce additional cash registers, the economy of floor space and the expenditures on the purchase and operation of cash registers is achieved. In this connection the experience of the Chernigov Shopping Center in determining the size of the brigade of checker-cashiers merits particular attention. It consists here of 32 people, which is nearly half as many as in the case of the individual organization of labor at the checkout area, while the capacity of the checkout area increased twofold. Moreover, by means of the elimination of unnecessary checkout counters in the lines the installation area for trade equipment increased by 5 percent, which ensured an increase of the commodity turnover by more than 1 million rubles, or 5.8 percent per square meter of floor space.

The collective settlement with customers has also been introduced at food stores. The analysis of the expedience of such a form of the brigade organization of labor in the paying area showed that it considerably expedites this process and is economically advantageous during the hours of the heaviest flow of customers.

/The efficiency of the technical trade process in many ways depends on the working conditions, particularly the schedules of work and relaxation/ [in boldface]. The brigades of the studied enterprises are primarily on a single-shift schedule and a schedule of a shift and a half. The former with a length of the workday of 7-8.2 hr, 2 days off and a fixed lunch break in the middle of the workday is used for 47.7 percent of the workers employed in multiple-skill brigades and for 18.1 percent of those employed in specialized brigades. This schedule is most prevalent at department stores and public dining enterprises.

The schedule of a shift and a half with a length of the workday of 11.5 hr, work on alternate days and a fixed hour-long lunch break has been introduced mainly for the workers of multiple-skill brigades of food stores (92.3 percent of their number). The results of the study of the speed of reflex reaction showed that the work of salespeople for 11-13 hrs while standing causes changes of the functional

state of the central nervous system: fatigue, which accumulates toward the end of the shift and the work week, develops in people. It is possible to eliminate its adverse consequences by the introduction of band diagrams of the departure from work, the regulated combination of occupations and the breakdown of the work shift into two parts. Thus, as a result of using band diagrams at the Yaroslavl' Central Department Store the plan of the commodity turnover was fulfilled with 5.8 percent fewer people than the standard number.

/The increase of the skills of personnel, and particularly their mastering of the principles of trade psychology, is a most important reserve of the further increase of the efficiency of the labor of salespeople/ [in boldface]. This is of particular importance for specialized brigades under the conditions of heavy flows of customers, in the case of a great physical and emotional load.

Interesting experience in teaching salespeople the art of service has been gained at the Tallinn House of Trade. A method of using video communications on the basis of television equipment has been developed here. A description of typical conflict situations, which arise between salespeople and customers, has been drawn up. Under the supervision of instructors at the schools of occupational skill training sessions and situational games are conducted, the optimum versions of the interrelations of the customer and the salesperson are developed. A series of lectures on the principles of trade service and the management of the collective is being given for the chiefs of sections (brigade leaders) and their deputies. Sociopsychological studies at the Tallinn House of Trade made it possible to take specific steps to create in the brigades a favorable climate, to decrease the turnover of personnel for the enterprise as a whole and to provide scientifically sound recommendations for inclusion in the plan of social development.

Thus, the extensive use of brigade forms of the organization of labor in trade requires consideration of the social factors, on which the effectiveness of the production process in many ways depends. The brigade becomes a collective in the true sense of this word only when relations of mutual assistance arise and a favorable psychological climate is created in the group of people who are working on a single order. In this case the brigade is able to realize most completely the requirements of scientific and technical progress, to ensure the extensive combination of occupations and functions and interchangeability in the labor process, as well as to use equipment and working time better. Moreover, there is reason to believe that at present it is practically impossible to use some advanced forms of the organization of labor in trade without the consideration of social and especially sociopsychological factors. It is a question of the forms of material responsibility in the brigades, and first of all in the section for the sale of goods.

At present the form of collective material responsibility, the essence of which is that every member of the labor collective is responsible for the physical assets, is the most prevalent. While having positive aspects, at the same time it holds back the process of the mastering by workers of related specialties, limits the interchangeability of salespeople and their transfer to sections with a higher flow of customers and adversely affects the development of interpersonal relations.

The form of the material responsibility of a limited group of people is being used successfully at a number of trade enterprises. In this case several members of the brigade (the chief of the section--the brigade leader, his deputies and the senior

salespeople) are responsible for the physical assets. As experience has shown, with such organization of labor the necessary conditions are created for the more extensive combination of occupations and functions, the psychological problem of the transfer of people from one section of the technological trade process to another or from one section to another within a single complex subject to the flow of customers disappears. And as a result the need for personnel is decreasing considerably, the lines are being eliminated and the expenditures of time on selling goods are decreasing. They are acting precisely in this way at the Vinnitsa Department Store, where owing to the establishment of such a procedure the number of salespeople is half as many as suggested by the norms, the intrashift losses have been reduced by 5-7 percent and the lines have practically been eliminated.

A special study was conducted by the All-Union Scientific Methods Center for the purpose of comparing the sociopsychological climate in brigades with collective material responsibility and with a limited group of materially responsible people. The indicator of the cohesion of the group, which is understood as the degree of unity of the opinions, appraisals and value orientations of the members of the collective, was chosen as the main indicator. In all 22 brigades were studied: 11 with collective material responsibility and 11 with a limited group of materially responsible people. The results of the study confirmed that in the latter the level of cohesion is considerably higher.

At the same time it would be incorrect to believe that such a social impact can be achieved only by the formal introduction of the material responsibility of a limited group of people. Although this form from a sociopsychological standpoint is more advanced, its very introduction requires preliminary work. First of all it is a question of the selection of people according to such personal qualities as honesty, conscientiousness and responsibility. It is also important to take into account the psychological compatibility of the workers. The economic and social effectiveness of this form of material responsibility can be achieved only in this case.

The introduction of the brigade organization of labor stipulates the use of new forms of socialist competition. One of the most modern forms is competition according to the personal accounts of efficiency, which is widespread at the enterprises of the Elektrostal' Combined Trade Organization. The brigade personal accounts stipulate the planned, adopted and actual indicators of the economic activity: the commodity turnover, labor productivity, transportation costs, losses for packaging and the saving of the natural loss, which are reported to the collective monthly. At the end of the month a commission made up of representatives of the administration and public organizations tallies the results of the work of the brigades on the basis of the actual fulfillment of the plan of the commodity turnover. The commitment to the turnover of local resources, decentralized purchases, the expanded sale of associated goods and the development of additional services are used as the indicators taken into account for the evaluation of efficiency. Individual accounts for each member of the brigade and each workplace are drawn up on the basis of the brigade personal accounts of efficiency. Thus, the main content of this form of socialist competition is the campaign for the fulfillment of the established assignments with fewer expenditures of manpower and material resources.

Thus, considerable experience in improving the brigade organization of labor, which it is possible to use at similar enterprises without additional studies, has been gained in the sector. At the same time, in our opinion, the sectorial labor services need to continue the study of the practical experience of the brigades operating in trade in order to identify the means of the further development of this advanced form of the organization of labor, as well as the factors which determine its effectiveness at retail trade enterprises. For the extensive dissemination of the identified advanced know-how it is expedient to introduce it on a planned basis, at which the decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality" is aimed.

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## LABOR

### MEASURES TO IMPROVE SANATORIUM, HEALTH RESORT TREATMENT

Moscow TRUD in Russian 26 Jan 82 p 2

[Decree of the CPSU Central Committee, USSR Council of Ministers, and AUCCTU "On measures to further improve sanatorium and health resort treatment and rest for workers and to develop the network of trade union sanatoria"]

[Text] The decree notes that sanatorium and health resort treatment and organized rest for workers are playing an important role in protecting and improving the health of the Soviet people. Over the past 10-year period, the network of trade union sanatoria has been expanded. New sanatoria, holiday hotels, rest homes, health resort polyclinics, mud-bath facilities, dietary dining rooms, and swimming pools have been put in operation. The material and technical base of sanatorium and health resort institutions and rest institutions has been reinforced. Skilled personnel are working in these institutions, which contributes to the level of treatment and sanitation and prevention work. Family rest has been developed significantly. Over the years of the 10th Five-Year Plan, the number of accommodations for families in rest institutions nearly doubled.

At the same time, the CPSU Central Committee, USSR Council of Ministers, and the AUCCTU noted that development of sanatorium and health resort treatment and organized rest for the country's people still is not keeping pace with increasing requirements. In individual sanatorium and health resort institutions and rest institutions, natural treatment factors are not being fully utilized and there are shortcomings in the organization of services for people. Work to increase the effectiveness of sanatorium and health resort treatment and to put the achievements of medical science into practice requires further improvement.

Insufficient measures are being taken to more efficiently utilize health resort lands and maintain natural treatment resources, primarily in the region of the Caucasus Mineral Waters and at health resorts on the Black Sea coast. Decisions to remove industrial enterprises not connected with the activity of resorts' treatment institutions from the health resorts' territory are being implemented slowly. Individual industrial, transport and agricultural enterprises are polluting the biosphere of health resort regions with dust and exhaust gases, toxic chemicals and other chemical substances.

In examining further improvement in sanatorium and health resort treatment and rest for workers and development of the network of trade union sanatoria as an integral part of measures to protect the health of the Soviet people, the CPSU Central Committee, USSR Council of Ministers, and the AUCCTU have made it incumbent upon the party central committees of union republics, party kraykoms and obkoms, the councils of ministers of union and autonomous republics, ispolkoms of kray and oblast soviets of people's deputies, trade union central committees and councils, the Central Council for Trade Union Health Resort Administration, and the USSR Ministry of Health, with the participation of ministries and departments concerned, to carry out a broad program of measures in the 1982-1985 period and the period up to 1990, aimed at further improvement in sanatorium and health resort treatment and rest for workers, to expand the network of sanatorium and health resort institutions and rest institutions, primarily of specialized sanatoria for treating patients with cardiovascular diseases and illnesses of the organs of movement and digestion, the nervous system and kidneys, as well as sanatorium and health resort institutions for parents with children, to develop family rest for workers.

The task has been undertaken to concentrate attention on further reinforcement of the material and technical base, carry out renovation of operating sanatoria and improve the extent of their public services and amenities, and to improve the public health condition of health resorts. To raise the level of organizational activity of republic, territorial and oblast councils in managing trade unions' health resorts. To improve exactingness toward the managers of sanatorium and health resort institutions and rest institutions for the quality of sanatorium and health resort treatment and rest for workers and the quality of their service, and to reinforce supervision over the work of sanatoria.

The decree points out the need to improve occupational training of employees for sanatorium and health resort institutions and rest institutions and to increase requirements for the level of service to those who are resting. To improve work on the selection, placement and ideological and political training of the employees of trade union sanatoria. To increase the role of sanatorium and health resort institutions and rest institutions in propaganda on a healthy way of life and public health knowledge, in the struggle to eradicate habits harmful to health--smoking and the use of alcohol.

The decree provides for the construction and commissioning in the 11th Five-Year Plan of sanatorium and health resort institutions and rest institutions with 60,000 beds, residences for service personnel of sanatoria and municipal facilities. Capital investments of 968 million rubles are being allocated for these objectives.

With the aim of providing sanatorium and health resort treatment for a substantial number of patients in the regions of their permanent residence, it is considered necessary to expand construction of sanatorium and health resort institutions at health resorts of republic and local importance, primarily in Siberia, the Far East, the Non-Chernozem zone and the Central-Chernozem region of the RSFSR, the republics of Central Asia and Kazakhstan.

The Central Council for Trade Union Health Resort Administration, together with the USSR Ministry of Health, has been ordered: to provide for expansion in the 11th Five-Year Plan of the network of specialized trade union sanatoria; to improve the quality and efficiency of sanatorium and health resort services for workers based on broad introduction in medical practice of the achievements of science and technology, advanced experience and scientific organization of labor, fuller utilization of natural treatment facilities, and improvement in the organization of dietary nourishment and therapeutic physical training; and to improve the sanatorium and health resort treatment and service in trade unions' sanatoria for invalids and those who took part in the Great Patriotic War.

The USSR Ministry of Health and the USSR Academy of Medical Sciences have been charged with: developing and implementing a broad program of scientific research in the 11th Five-Year Plan in the field of health resort treatment and physiotherapy, primarily in treating patients with cardiovascular, gastrointestinal, neurological and gynecological illnesses; reinforcing coordination of the activities of scientific research institutes in health resort treatment and physiotherapy and other scientific research institutions dealing with the problems of using natural treatment facilities and physiotherapy; and improving the effectiveness of scientific research.

The USSR Ministry of Health has been committed: to increase the responsibility of physicians at treatment and prevention institutions for the quality of the medical selection of persons to be sent for sanatorium and health resort treatment; to carry out continuing organizational and methodical management and supervision of the organization of treatment work in trade union sanatoria; to reinforce state sanitary inspection of the protection of natural treatment facilities at health resorts; to improve the supply of medical equipment, apparatus and medicines to trade union sanatorium and health resort institutions; and to ensure further improvement in the training of physicians of different specialties in the use of natural and other physical factors for treatment and prevention purposes.

The Central Council for Trade Union Health Resort Administration, trade union central committees and councils, the USSR Ministry of Culture and the All-Union Society for Knowledge have been ordered to raise the level of ideological and educational and popular-cultural work in sanatoria; to develop and implement measures for significant improvement in lecture and musical propaganda, film and concert and excursion services; and to more fully utilize opportunities for creative unions, societies and organizations and collectives for amateur artistic activity in organizing the leisure of those who are resting.

With the aim of more fully meeting the demand of workers and members of their families for organized rest and treatment of parents with children, ministries, departments, councils of ministers of union republics, and trade union central and republic committees and councils have been instructed: to develop and implement plans in the 1982-1985 period for the year-round use of departmental Young Pioneer camps, situated primarily in the country's health resort localities, with a view to organizing rest and treatment in them for adults and parents with children during the fall and winter period, and to improve the extent of public services and amenities and ensure that camps are supplied with the needed stock and equipment, including medical equipment; to take steps to reinforce and develop the

network of rest facilities attached to industrial, construction, transport, agricultural and other enterprises and organizations; to ensure expansion in the 1982-1985 period of the network of rest facilities (primarily for workers and members of their families) of enterprises and organizations in the territorial-production complexes being newly established and developed in the Far East, the Urals, Siberia and Kazakhstan; and to expand combined rest for parents with children in the 11th Five-Year Plan through more complete utilization of the rest facilities mentioned throughout the entire year.

The proposal of the Central Council for Trade Union Health Resort Administration to bring the number of accommodations in sanatoria for parents with children up to 15,000 and in rest institutions for families up to 150,000 by the end of 1985 was approved. The councils of ministers of union republics have been ordered to improve the distribution and utilization of travel authorizations for sanatorium and health resort institutions and rest institutions allocated by trade unions to social security organs for veterans of the Great Patriotic War who are not working and on a pension.

The procedure in accordance with which recently begun construction of sanatorium and health resort institutions, residences, and cultural-personal services and public utility projects, as well as engineering supply lines, at health resorts of countrywide importance is carried out in a centralized manner was established by the decree. The AUCCTU has been charged with the functions of a single client for construction of sanatorium and health resort institutions, rest institutions, health resort hotels, as well as residences, cultural and personal services projects and the engineering networks and structures which are part of the complex of these institutions and hotels; the ispolkoms of local soviets of people's deputies have been charged with these functions for construction of residences and water and sewage networks and installations, as well as other public utility and cultural and personal services projects which are not included in the complex of sanatorium and health resort institutions and rest institutions. The decree has established that ministries, departments, enterprises, organizations and institutions which take part proportionately in the construction of sanatorium and health resort institutions and rest institutions be granted travel authorizations for these institutions in proportion to the capital investments turned over.

The Central Council for Trade Union Health Resort Administration, the councils of ministers of union republics, and ministries and departments which are carrying out the planning and construction of projects at health resorts have been ordered to regulate the development of health resorts' territories, to conduct it in conformity with regional planning and the general plans of health resorts, and to build sanatorium and health resort institutions and rest institutions which are economical in construction and operation and which meet current requirements for organizing the treatment and rest of workers. The councils of ministers of union republics, the USSR Stroybank [All-Union Bank for Financing Capital Investments], the USSR Gosbank, and the Central Council for Trade Union Health Resort Administration have been charged with reinforcing supervision over development of the territories of health resorts and rest zones and the construction of sanatorium and health resort institutions and rest institutions.

The USSR Ministry of Health, jointly with the Central Council for Trade Union Health Resort Administration, the USSR Gosstroy, the councils of ministers of union republics, the USSR Academy of Medical Sciences, the USSR Ministry of Geology, the USSR State Committee for Hydrometeorology and Environmental Control, have been ordered to develop a program of scientific research for the efficient utilization of natural resources and sanitation of the environment of health resorts and rest zones.

The USSR Ministry of Health, the USSR Gosgortekhnadzor [State Committee for Supervision of Safe Working Practices in Industry and for Mine Supervision], the USSR Gosstroy, the USSR Ministry of Land Reclamation and Water Resources, the USSR State Committee for Hydrometeorology and Environmental Control, the USSR State Committee for Standards, and the Central Council for Trade Union Health Resort Administration must develop and approve the appropriate standardized and technical documentation which regulates the efficient utilization and protection of natural treatment facilities, as well as monitoring of environmental pollution, at health resorts.

With the aim of reinforcing the protection and efficient utilization of health resorts' natural treatment facilities, the councils of ministers of union and autonomous republics and the ispolkoms of the soviets of people's deputies must: complete ratification of the statutes on each health resort in the procedure established by the Statute on Health Resorts; develop and ratify overall plans for protecting the nature of health resorts of countrywide importance; take steps to reduce harmful discharges into the atmosphere and water supplies of health resorts (including discharges of used mineral waters), implement measures for the hydrobiological reclamation of shore regions being used for treatment purposes; develop measures in the 1982-1985 period and the period up to 1990 aimed at limiting transport traffic passing through health resorts and rest zones, at regulating local transport traffic, and at the withdrawal of industrial enterprises not connected with services for the local population of health resorts and those who are resting, and of garages and industrial transport outside health resorts and the zones indicated.

The State Committee for Forestry has been advised to ensure that measures are implemented to improve the water protection of forests for localities of mineral waters and therapeutic mud when they conduct forestry management operations in wooded areas where there are districts of health resort sanitary protection.

The councils of ministers of union republics, the USSR Gosgortekhnadzor, the USSR Ministry of Health, the USSR Ministry of Land Reclamation and Water Resources, and the Central Council for Trade Union Health Resort Administration have been set the task of reinforcing supervision over fulfillment of the requirements of the Statute on Health Resorts, and over the protection and efficient utilization of all localities of mineral waters and therapeutic mud being developed and used by sanatoria, mud-bath treatment facilities, sanatoria-clinics and other treatment institutions, as well as by mineral water bottling plants situated both on and outside health resorts' territory.

The councils of ministers of union republics, the Ministry of Railways, the Ministry of Civil Aviation and the Ministry of the Maritime Fleet, together with the Central Council of Trade Union Health Resort Administration, have been charged with taking steps to ensure that persons who have travel authorizations to sanatorium and health resort institutions and rest institutions are provided with travel tickets for all the appropriate forms of passenger transportation in a timely manner, taking into account that the sale of such tickets is to be organized in the summer health resort season in special booking offices, as a rule.

The USSR Ministry of Communications has been ordered to improve the organization of interurban telephone communications for trade union sanatoria; to improve the quality of service in post offices and to increase the network of them at health resorts, in rest zones, and directly in sanatoria; and to ensure that the demand of those who are resting for newspapers and magazines is met more fully. The USSR Ministry of Trade, the Central Union of Consumer Cooperatives, and the councils of ministers of union republics have been ordered to provide for development in the 1982-1985 period of the trade network at health resorts, in rest zones, and directly in trade union sanatoria for the sale of a wide variety of goods in demand at health resorts. The councils of ministers of union republics have been ordered to take steps to improve organization of everyday services in trade union sanatoria, with a view toward expanding the network of everyday enterprises and institutions at health resorts in the 1982-1985 period and introducing in their operation new, progressive forms of service for those staying at health resorts. The USSR State Committee for Publishing Houses, Printing Plants and the Book Trade has been ordered to provide for the issue of popular scientific, practical and reference literature on sanatorium and health resort subject matter in accordance with the orders of the Central Council for Trade Union Health Resort Administration.

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CSO: 1828/72A

# DEMOGRAPHY

## NUMBER OF BIRTHS AND WOMEN IN THE USSR LISTED

Moscow VESTNIK STATISTIKI in Russian No 1, Jan 82 pp 64-78

### NUMBER OF CHILDREN BORN<sup>1</sup>

1. Distribution of All Women According to the Number of Children Born For the USSR and Union Republics <sup>2</sup> (Per 1000 Women 15 Years and Older)									
	Women not bearing any children	Women Bearing Children							Average number of children born
		1 child	2 children	3 children	4 children	5 children	6 children	7 and more children	
USSR.....	252	229	253	110	55	36	22	43	1,963
RSFSR.....	245	253	259	105	51	34	19	34	1,859
Ukrainian SSR.....	230	246	299	120	49	26	13	17	1,752
Belorussian SSR....	247	185	268	141	70	41	20	28	1,979
Uzbek SSR.....	307	126	136	93	72	62	54	150	2,905
Kazakh SSR.....	267	173	209	117	68	51	34	81	2,377
Georgian SSR.....	281	150	240	158	79	42	22	28	1,987
Azerbaijan SSR.....	361	104	126	95	77	65	53	119	2,599
Lithuanian SSR.....	280	205	266	121	57	32	16	23	1,778
Moldavian SSR.....	271	203	224	111	62	44	27	58	2,112
Latvian SSR.....	278	287	271	90	35	18	9	12	1,479
Kirghiz SSR.....	280	144	175	108	69	55	42	127	2,755
Tajik SSR.....	298	115	126	84	67	59	53	198	3,279
Armenian SSR.....	318	102	161	146	98	65	41	69	2,400
Turkmen SSR.....	313	128	138	89	67	57	49	159	2,917
Estonian SSR.....	266	268	283	101	39	20	10	13	1,558

<sup>1</sup> Continuation of the publication of the results of the Census in the magazine VESTNIK STATISTIKI (for the beginning see No 2, 6-12 for 1980 No 1, 2, 4, 5, 11, 12 for 1981).

<sup>2</sup> All children whom women had given birth to at the moment the Census was taken were considered for the Census irrespective of whether they are alive or not and whether they were living together with their mother or not.

2. Distribution of Women Who are Married According to the  
Number of Children Born for the USSR and Union Republics

(Per 1000 Women Who are Married)

	Women not bearing any children	Women Bearing Children							Average number of children born
		1 child	2 children	3 children	4 children	5 children	6 children	7 and more children	
USSR.....	94	278	337	130	58	37	22	44	2,262
RSFSR.....	95	312	349	121	50	31	17	25	2,038
Ukrainian SSR.....	95	283	390	137	48	23	11	13	1,947
Belorussian SSR....	82	224	363	172	76	42	19	22	2,271
Uzbek SSR.....	93	154	178	120	93	81	72	209	3,897
Kazakh SSR.....	82	216	284	148	79	58	39	94	2,883
Georgian SSR.....	79	174	333	212	99	49	25	29	2,505
Azerbaijan SSR.....	91	135	180	135	110	92	77	180	3,794
Lithuanian SSR.....	100	257	364	148	63	32	16	20	2,100
Moldavian SSR.....	108	248	295	135	72	49	31	62	2,498
Latvian SSR.....	129	344	361	102	34	15	7	8	1,690
Kirghiz SSR.....	90	177	232	136	82	66	51	166	3,495
Tajik SSR.....	104	141	162	107	83	74	68	261	4,248
Armenian SSR.....	76	131	233	209	134	85	52	80	3,165
Turkmen SSR.....	95	160	182	114	86	74	66	223	3,952
Estonian SSR.....	114	315	383	117	38	18	7	8	1,783



3. Number of Children Born by Women With Various Levels of Education for the USSR and Union Republics

	Children Born Per 1000 Women 15 Years and Older							
	By All Women	By Women Having an Education						By Women not Having an Elementary Education
		Higher	Incomplete Higher	Special Mid Level	General Mid Level	Incomplete Mid Level	Elementary	
USSR.....	1,963	1,279	710	1,365	1,167	1,648	2,718	3,433
RSFSR.....	1,859	1,184	682	1,306	995	1,510	2,543	3,429
Ukrainian SSR.....	1,752	1,268	667	1,329	1,146	1,520	2,259	2,760
Belorussian SSR.....	1,979	1,317	747	1,409	1,084	1,596	2,652	3,269
Uzbek SSR.....	2,905	1,923	727	1,785	1,874	2,653	4,882	4,872
Kazakh SSR.....	2,377	1,572	852	1,606	1,378	1,938	3,690	4,280
Georgian SSR.....	1,987	1,362	747	1,536	1,521	1,781	2,970	3,650
Azerbaijan SSR.....	2,599	1,551	621	1,849	1,495	2,317	4,259	4,664
Lithuanian SSR.....	1,778	1,184	771	1,270	987	1,254	2,441	2,865
Moldavian SSR.....	2,112	1,323	802	1,341	932	1,488	2,912	3,764
Latvian SSR.....	1,479	1,136	810	1,207	1,056	1,313	1,908	2,477
Kirghiz SSR.....	2,755	1,899	1060	1,819	1,655	2,261	4,310	4,669
Tajik SSR.....	3,279	1,774	1040	1,812	1,685	2,547	5,406	5,668
Armenian SSR.....	2,400	1,587	896	1,828	1,671	2,158	4,133	5,123
Turkmen SSR.....	2,917	1,832	1072	1,746	1,663	2,895	4,543	4,732
Estonian SSR.....	1,558	1,234	896	1,339	1,144	1,368	2,021	2,658

4. Distribution of Women of Different Nationalities  
According to the Number of Children Born for the USSR  
(Per 1000 Women of the Corresponding Nationality Age 15 Years or Older)

	Women not bearing any children	Women Bearing Children							Average number of children born
		1 child	2 children	3 children	4 children	5 children	6 children	7 and more children	
All women 15 years or older.....	252	229	253	110	55	36	22	43	1,963
Russians.....	239	266	273	104	47	29	15	27	1,773
Ukrainians.....	223	234	298	128	54	29	14	20	1,823
Belorussians.....	237	190	271	141	70	42	21	28	2,006
Uzbeks.....	326	89	90	83	77	72	67	196	3,293
Kazakhs.....	346	99	106	86	72	68	58	165	2,987
Georgians.....	286	140	250	167	79	38	19	21	1,928
Azerbaijanis.....	388	77	92	87	80	72	61	143	2,784
Lithuanians.....	286	196	260	124	60	33	17	24	1,795
Moldavians.....	286	181	199	115	69	49	32	69	2,235
Latvians.....	294	261	264	100	40	20	9	12	1,495
Kirghiz.....	333	88	93	82	72	66	58	208	3,363
Tajiks.....	321	78	78	71	70	67	65	250	3,700
Armenians.....	307	119	179	148	95	61	36	55	2,277
Turkmens.....	350	85	84	76	72	66	60	207	3,299
Estonians.....	281	242	271	113	45	24	11	13	1,599

## WOMEN IN THE USSR

Women and men have various rights in the USSR.

The implementation of these rights is ensured by assigning women equal opportunity with men in obtaining an education and professional training, in work, rewards for it and advancement in work, in social, political and cultural activities and also by special measures for safeguarding the work and health of women; by creating conditions which make it possible for women to combine work with motherhood; by the legal protection and material and moral support of motherhood and childhood including allocating paid leave and other privileges to pregnant women and mothers, and gradually reducing the working time for mothers who have children of young ages.

### Article 35 of the USSR Constitution

1. The number of women in the USSR (at the beginning of the year)		
	Number of women Millions of People	Percentage of Women of the Entire Population
1939.....	99.3	52.1
1959--according to the census of 15 Jan....	114.8	55.0
1966.....	125.9	54.2
1970--according to the census of 15 Jan....	130.3	53.9
1975.....	135.8	53.6
1976.....	136.9	53.5
1977.....	137.9	53.5
1978.....	139.0	53.4
1979--according to the census of 17 Jan.....	140.1	53.4
1980.....	141.1	53.3
1981.....	142.1	53.3

2. Number of women by Union Republics								
	Number of women Thousands of people				Percentage of women of the entire population			
	1939	1959	1970	1981	1939	1959	1970	1981
USSR.....	99,273	114,777	130,321	142,089	52	55	54	53
RSFSR.....	57,276	65,109	70,754	74,817	53	55	54	54
Ukrainian SSR...	21,107	23,294	25,821	27,162	52	56	55	54
Belorussian SSR	4,595	4,474	4,864	5,172	52	56	54	53
Uzbek SSR.....	3,069	4,222	6,055	8,217	48	52	51	51
Kazakh SSR.....	2,920	4,881	6,746	7,787	48	53	52	52
Georgian SSR....	1,775	2,179	2,484	2,685	50	54	53	53
Azerbaijan SSR..	1,562	1,941	2,634	3,179	49	52	51	51
Lithuanian SSR..	1,499	1,466	1,660	1,822	52	54	53	53
Moldavian SSR...	1,237	1,551	1,907	2,110	50	54	53	53
Latvian SSR.....	998	1,174	1,283	1,368	53	56	54	54
Kirghiz SSR.....	716	1,091	1,532	1,875	49	53	52	51
Tajik SSR.....	715	1,016	1,474	2,028	48	51	51	51
Armenian SSR....	634	921	1,275	1,599	49	52	51	51
Turkmen SSR.....	607	786	1,096	1,471	48	52	51	51
Estonian SSR....	563	672	736	797	53	56	54	54

3. Number of women deputies of the USSR Supreme Soviet, of union and autonomous republic supreme soviets and local soviets of people's deputies		
	Number of women deputies	Percentage of women of the entire number of deputies
USSR Supreme Soviet (1979 elec- tions).....	487	32
Union Soviet.....	240	32
Soviet of Nationalities.....	247	33
Union republic supreme soviets (1980 elections).....	2,417	36
Autonomous republic supreme soviets (1980 elections).....	1,382	40
Kray, oblast, okrug, rayon, city, village and rural soviets of people's deputies (1980 elec- tions).....	1,127,120	50

In prerevolutionary Russia, women not only did not have suffrage rights but also were deprived of many other civil and political rights or were considerably limited in them.

The Great October Socialist Revolution guaranteed women complete equality in socialist society. Lenin's principle of extensively attracting women to managing the state is being steadfastly fulfilled.

Women comprise almost one-third of the highest organ of the state's authority--the USSR Supreme Soviet. There is not such a broad representation of women in the parliament of a single capitalist country in the world. There are less women in the parliaments of every capitalist country, taken all together, than in the USSR Supreme Soviet. Thus, for example, in the USA there are only 16 women in the 96th session of Congress or 3 percent.

4. Number of women people's judges and people's assessors  
of local (urban) people's courts by union republics  
at the beginning of 1981

	Number of women people's judges*	Percentage of women of the total number of people's judges	Number of women people's assessors	Percentage of women of the total number of people's assessors
USSR.....	3,204	32.6	380,900	53.0
RSFSR.....	2,119	36.2	231,900	55.8
Ukrainian SSR...	456	28.0	51,862	52.2
Belorussian SSR	91	28.6	13,104	54.0
Uzbek SSR.....	75	23.1	9,461	39.4
Kazakh SSR.....	145	26.9	26,939	47.5
Georgian SSR....	33	19.8	5,771	48.5
Azerbaijan SSR..	27	19.1	5,116	35.5
Lithuanian SSR..	46	31.3	7,423	52.6
Moldavian SSR...	36	26.5	7,296	54.4
Latvian SSR.....	57	50.4	5,103	58.7
Kirghiz SSR.....	26	26.0	4,019	50.3
Tajik SSR.....	17	17.5	3,598	41.3
Armenian SSR....	15	18.1	2,787	41.2
Turkmen SSR.....	24	24.5	3,430	46.7
Estonian SSR....	37	53.6	3,091	59.6

\* Including representatives of local (urban) people's courts.

5. Average annual number of women laborers and office personnel in the national economy		
Years	Number of women laborers and office personnel-- Thousands of people	Percentage of women of the total number of workers and office personnel
1940	13,190	39
1945	15,920	56
1950	19,180	47
1955	23,040	46
1960	29,250	47
1965	37,680	49
1970	45,800	51
1975	52,539	51
1980	57,559	51
1981	58,500	51

Soviet power created all of the conditions for women to actively participate in all sectors of the national economy. The greatest percentage of women of the total number of laborers and office workers in 1980 was in trade and public eating establishments--84 percent; in health care, physical fitness and social assistance--82 percent; in national education--74 percent; in culture--73 percent.

The principal directions for economic and social growth in the USSR for 1981-1985 and for the period to 1990 which were approved by the 26th Party Congress stipulate: "the creation of conditions for strengthening the family, extending the advantages and privileges for families who have children and working mothers."

6. Percentage of women of the total number of laborers and office personnel by Union Republics

	1940	1950	1960	1970	1975	1980	1981
USSR.....	39	47	47	51	51	51	51
RSFSR.....	41	50	50	53	53	52	52
Ukrainian SSR.....	37	43	45	50	52	52	52
Belorussian SSR....	40	45	49	52	53	53	53
Uzbek SSR.....	31	40	39	41	42	43	43
Kazakh SSR.....	30	40	38	47	48	49	49
Georgian SSR.....	35	40	40	43	45	46	46
Azerbaijan SSR.....	34	40	38	41	43	43	43
Lithuanian SSR.....	30	38	43	49	51	52	52
Moldavian SSR.....	35	38	43	51	51	51	51
Latvian SSR.....	36	45	49	53	54	54	54
Kirghiz SSR.....	29	41	41	47	48	48	48
Tajik SSR.....	29	39	37	38	38	39	39
Armenian SSR.....	34	40	38	41	45	45	46
Turkmen SSR.....	36	41	36	39	40	41	41
Estonian SSR.....	35	48	50	53	54	54	54



7. Percentage of women who take part in work at a kolkhoz  
of the average annual number of all kolkhoz workers by Union Republics

	1960	1965	1970	1975	1980
USSR.....	52	50	50	48	47
RSFSR.....	53	50	49	46	44
Ukrainian SSR.....	54	53	52	50	49
Belorussian SSR.....	55	53	52	50	48
Uzbek SSR.....	45	46	48	49	50
Kazakh SSR.....	43	41	40	40	39
Georgian SSR.....	47	46	48	50	51
Azerbaijan SSR.....	47	47	46	48	51
Lithuanian SSR.....	47	46	46	45	43
Moldavian SSR.....	50	49	51	50	52
Latvian SSR.....	52	51	47	45	44
Kirghiz SSR.....	44	43	43	43	44
Tajik SSR.....	42	41	43	44	46
Armenian SSR.....	43	43	44	46	46
Turkmen SSR.....	50	50	48	48	49
Estonian SSR.....	56	51	47	44	42

8. Number of women specialists with a higher or mid-level special education who are employed in the national economy*				
Years	All women specialists with a higher or mid-level special education in thousands of people	Including		Percentage of women with a higher or mid-level special education of the total number of specialists
		Those with a higher education	Those with a mid-level special education	
1928	151	65	86	29
1941	864	312	552	36
1955	3,115	1,155	1,960	61
1960	5,189	1,865	3,324	59
1965	6,941	2,518	4,423	58
1970	9,900	3,568	6,332	59
1975	13,411	4,962	8,449	59
1980	16,956	6,410	10,546	59

\* The data cited are based on materials that were calculated once only: for 1941 on 1 Jan; for 1955 on 1 Jul; for 1960 on 1 Dec; for 1965, 1970, 1975, and 1980 in the middle of November.

In prerevolutionary Russia a very small number of women, chiefly of the privileged strata of society, received an education in higher or special institutions of learning.

In the USSR women receive higher and mid-level special education equally with men. In 1980 the number of women specialists with a higher or mid-level special education who were employed in the national economy comprised 17 million people and was greater than in 1940 by a factor of 20.

9. The number of women physicians of all specialists (at the end of the year)		
Years	Thousands of people	As a percentage of the total number of physicians
1940	96.3	62
1950	204.9	77
1955	254.8	76
1960	327.1	76
1965	408.9	74
1970	479.6	72
1975	583.5	70
1980	683.1	69

Women physicians comprise a majority of the total number of physicians.

Based on the latest published data in the USA women physicians comprise only 7 percent of the total number of physicians, or 34,200 people.

10. The number of women on the staff of teachers at general education day schools (by the USSR Ministry of Education and Ministry of Communications schools at the beginning of the academic year)

	Number of women teachers (excluding those that hold more than one posi- tion--thousands)	As a percentage of the total number of teachers
All teachers (including school administrators)*		
1940/41.....	615	60
1950/51.....	999	70
1960/61.....	1,312	70
1970/71.....	1,669	71
1975/76.....	1,692	71
1980/81—in all.....	1,653	71
Including:		
Directors of elementary schools.....	0.2	85
Directors of eight-year schools.....	16	38
Directors of high schools.....	19	34
Assistant directors of eight-year schools	13	62
Assistant directors of high schools.....	84	68
Teachers of grades 1-10 (11) excluding teachers who are school administrators	1,407	80
Music, singing, drawing, drafting, phy- sical education, and vocational teachers	114	36

\* School administrators, as a rule, are simultaneously engaged in teaching work.

Women comprised 60 percent of the teachers of general education day schools in the country during the 1940/41 academic year; at the time the relative proportion of women directors at shortened secondary schools equaled 12 percent, women directors of high schools was 13 percent, women assistant directors of shortened secondary schools was 32 percent and women assistant directors of high schools was 30 percent.

11. Percentage of women students in higher and secondary special education institutions of the total number of students  
(at the beginning of the academic year)

	1940/41	1950/51	1960/61	1970/71	1975/76	1980/81
Percentage of women that are students of higher educational institutions...	58	53	43	49	50	52
Of the above those who are in the following educational institutions:						
Industry, construction, transportation and communications.....	40	30	30	38	40	42
Agriculture.....	46	39	27	30	33	34
Economics and law.....	64	57	49	60	62	67
Health services, physical education and sports.....	74	65	56	56	56	58
Education, art and cinematography....	66	71	63	66	68	69
Percentage of women that are studying in mid-level special educational institutions.....	55	54	47	54	54	56
Of the above those who are in the following educational institutions:						
Industry, construction, transportation and communications.....	32	35	33	40	41	43
Agriculture.....	37	41	38	37	37	37
Economics and law.....	60	73	75	83	85	85
Health services, physical education and sports.....	83	85	84	87	88	90
Education, art and cinematography....	60	77	76	81	82	85

12. Percentage of women who are students in higher educational institutions in individual countries

Countries	Academic Year	Percentage of women who are students in higher educational institutions
USSR.....	1980/81	52.0
Bulgaria.....	1980/81	53.2
Hungary.....	1980/81	49.7
Vietnam.....	1979/80	24.7
German Democratic Republic.....	1980/81	48.7
Mongolian People's Republic.....	1980/81	56.4
Poland.....	1979/80	49.8
Romania.....	1980/81	43.0
Czechoslovakia.....	1980/81	41.7
Albania.....	1969/70	32.4
Laos.....	1974/75	27.5
Yugoslavia.....	1979/80	40.0
Austria.....	1978/79	43.0
Afghanistan.....	1977/78	26.5
Belgium.....	1977/78	43.1
Great Britain.....	1977/78	41.6
Denmark.....	1976/77	41.9
Egypt.....	1976/77	30.2
India.....	1977/78	23.0
Italy.....	1979/80	53.6
Netherlands.....	1977/78	27.4
Syria.....	1975/76	25.3
USA.....	1977/78	45.5
Turkey.....	1977/78	24.4
German Federal Republic.....	1979/80	41.3
France <sup>*</sup> .....	1976/77	48.4
Sweden.....	1979/80	56.4
Japan.....	1978/79	22.4

\* In universities.

13. Number of women who are scientific workers  
(at the end of the year; thousands of people)

	1950	1960	1970	1975	1980
All women scientific workers	59.0	128.7	359.9	488.3	548.1
Those who have a scientific degree:					
Doctors of science.....	0.6	1.1	3.1	4.5	5.2
Candidates of science.....	11.4	28.8	60.7	94.0	111.2
Of the total number of women scientific workers those who have a science title:					
Academicians, member-correspondents, professors.....	0.5	0.7	1.8	2.4	3.0
Assistant professors.....	3.2	6.2	14.4	19.6	26.3
Senior scientific workers.....	3.5	5.8	9.8	12.5	14.9
Junior scientific workers and assistants.....	9.4	13.6	24.3	22.3	19.1

In 1980 women comprised 40 percent of the total number of scientific workers in the country, 14 percent of the total number of doctors of science and 28 percent of the candidates of science.

In 1980, 28,600 women were doing graduate work or 30 percent of the total number of graduate students.

In the USA, based on the latest published data, the proportion of women of the total number of scientific workers comprised 9.2 percent.

14. Number of women who are scientific workers by Union Republics  
at the end of 1980

	Total	Those who have a science degree		Of the total number of women scientific workers, those who have a scientific title			
		Doctors of Science	Candi- dates of Science	Academicians, member cor- respondents, professors	Assistant professors	Senior scientific workers	Junior scientific workers and assistants
USSR.....	548,071	5,248	111,193	2,986	26,301	14,904	19,092
RSFSR.....	380,424	3,618	73,644	1,941	16,599	9,409	13,673
Ukrainian SSR....	72,921	684	14,525	430	4,110	1,804	880
Belorussian SSR..	15,664]	84	3,182	61	878	449	674
Uzbek SSR.....	12,880	107	3,287	71	906	404	666
Kazakh SSR.....	15,486	131	3,639	96	974	429	414
Georgian SSR.....	10,179	182	2,755	95	696	656	310
Azerbaijan SSR...	8,385	101	1,978	73	359	339	865
Lithuanian SSR...	5,352	51	1,584	35	404	245	21
Moldavian SSR....	3,228	37	910	25	193	106	37
Latvian SSR.....	5,081	66	1,403	32	318	221	377
Kirghiz SSR.....	3,450	38	841	30	171	151	10
Tajik SSR.....	3,065	25	664	23	163	101	174
Armenian SSR.....	7,590	77	1,562	44	269	376	797
Turkmen SSR.....	2,007	16	497	11	102	86	--
Estonian SSR.....	2,359	31	722	19	159	128	194



15. Expenditures according to the USSR State Budget,  
for grant payments to mothers, for education and services for children  
(millions of rubles)

	1945	1950	1960	1970	1975	1980
Grants for pregnancy and childbirth, for mothers with many children and single mothers, for articles for the care and feeding of a child and for children of families that are not sufficiently provided for*.....	179	542	1,005	1,301	2,512	2,624
Expenses for services for children in children's homes, kindergartens, nursery-kindergartens, nurseries, pioneer camps and institutions that work with children in schools (excluding expenses for capital investments).....	423	1,283	1,725	4,298	5,584	7,261
Expenditures for the maintenance of general education day schools including boarding schools (excluding expenditures for capital investments)...	858	1,972	3,135	6,604	8,168	8,705

\* In addition the grants are paid for pregnancy and childbirth, for articles for the care and feeding of a child and for children of families that are not sufficiently provided for from central union social welfare funds and social insurance funds for kolkhoz workers (millions of rubles): in 1970--97; in 1975--465; in 1980--398.

Expenditures, according to the USSR State Budget, for the maintenance of general education day schools, including boarding schools, increased by a factor of 10 in comparison with 1940, expenses for kindergartens, kindergarten-nurseries and nurseries increased by a factor of 22.3. Along with funds from the state budget funds are also spent on services for children by state, cooperative, trade union and other social organizations and kolkhoz funds.

In 1973 grants for pregnancy and childbirth for working mothers were established in the amount of a full salary, irrespective of the length of work service, for all working women; the number of paid days of leave due to a sick child increased and since 1 Nov 1974 grants were established for children in workers' families that are insufficiently provided for. The practice was introduced of providing textbooks free of charge to pupils in grades 1 through 5 of general education schools. Beginning with 1981 partial paid vacation is being introduced throughout the rayons of the country for working women to have a leave of absence for a child until he has reached the age of one year, a supplemental leave without forfeiture of wages until he reaches the age of one and a half and payment of a one time state grant upon the birth of a child; state grants for single mothers have been increased; an additional three-day paid leave and a leave to care for children without forfeiture of wages for a period of up to 2 weeks has been granted to working women with the approval of the administration.

16. Number of mothers with many children who receive a monthly state grant (thousands of people)						
	1945	1950	1960	1970	1975	1980
The number of mothers with many children who receive a grant.....	844	3,079	3,455	3,211	2,605	2,150
Including those:						
with four children.....	287	1,449	1,660	1,172	841	717
with five children.....	181	839	899	782	583	472
with six children.....	100	440	484	546	430	325
with seven and more children	276	351	412	711	751	636

In 1980, 2,150,000 mothers received a monthly state grant for four or more children; in addition, 280,000 mothers who have two children received a one time monthly state grant upon the birth of a third child.

Since 1 November 1981 grants were introduced for mothers upon the birth of the first and second child in the Far East and Siberian rayons, in the northern regions of the country (in Karel'skaya ASSR and Komi ASSR and in Arkhangel'skaya and Murmanskaya oblasts) and also in Vologodskaya, Novgorodskaya, and Pskovskaya oblasts; from 1 November 1982 they will be introduced in the remaining rayons of the RSFSR, the rayons in the Ukraine, Belorussia, Moldavia and the Pribaltic republics; from 1 November 1983--in the rayons of Kazakhstan, Middle Asia and Zakavkaz'ya.

Women who gave birth to 5 or more children and who have raised them to the age of 8 have additional advantages in obtaining a pension based on age as well as length of work service.

17. Number of mothers with many children who have had  
the honorary title of "Mother Heroine" conferred upon them  
and the number of mothers with many children who have been  
awarded Orders of "Maternal Glory" and the "Medal of Motherhood"  
(Thousands)

	From Jul 1944 through 1949	From 1950 through 1980	Total
Those with the title "Mother-Heroine" conferred upon them	31	293	324
Number of those awarded Orders of "Maternal Glory":			
Grade I.....	67	616	683
Grade II.....	193	1,213	1,406
Grade III.....	468	2,173	2,641
Number of those awarded "Medal of Motherhood":			
Grade I.....	754	3,534	4,288
Grade II.....	1,434	5,668	7,102

Mothers have nationwide honor in the USSR. The honorary title of "Mother-Heroine" is conferred upon mothers who have given birth to and raised 10 children and they are presented with the Order of "Mother-Heroine."

The Order of "Maternal Glory" was established to award to mothers who have given birth to and raised 7, 8 and 9 children, while the "Medal of Motherhood" is to be awarded to mothers who have given birth to and raised 5 and 6 children.

18. Medical and Dispensary Assistance for Women (at the end of the year; thousands)						
	1940	1950	1960	1970	1975	1980
Number of beds (medical and obstetric) for pregnant women and those in labor....	147.1	143.0	213.4	223.8	223.0	230.4
Number of consultation offices for females, pediatric polyclinics and dispensaries (independent or as part of other institutions.....)	8.6	11.3	16.4	21.0*	22.1	24.3*
<p>* The number of consultation offices for females comprised 9,700 in 1970, 10,400 in 1980; the number of pediatric polyclinics and dispensaries comprised 11,300 in 1970 and 13,900 in 1980.</p>						

The safeguarding of motherhood in the USSR is ensured by a state system of special institutions (maternity homes, maternity hospitals and consultation offices for females and others) that are entrusted with the care of women's health. Medical assistance for mothers, as for the entire population, is rendered free of charge.

In 1980, 230,000 medical and obstetric beds had been established for pregnant women and women in labor; in 1940 they numbered 147,000.

In prerevolutionary Russia there were 9 consultation offices in all that served women and children; in 1940, consultation offices for females and pediatric polyclinics and dispensaries already numbered 8,600 and by the end of 1980 24,000 or greater by a factor of 2.8 than in 1940.

At the present time practically all women are provided with medical assistance during childbirth. In 1911 only 5.2 percent of pregnant women received medical assistance during childbirth.

19. Number of beds (medical and obstetric) for pregnant women  
and women in labor by Union Republic (at the end of the year; thousands)

	1940	1950	1960	1970	1975	1980
USSR.....	147.1	143.0	213.4	223.8	223.0	230.4
RSFSR.....	90.7	82.7	112.9	110.3	110.5	113.1
Ukrainian SSR.....	35.0	33.7	48.9	45.1	41.6	39.7
Belorussian SSR....	5.4	4.4	6.7	6.9	7.0	7.3
Uzbek SSR.....	2.8	3.5	8.7	13.4	15.2	19.2
Kazakh SSR.....	4.3	4.9	11.9	16.3	15.7	16.4
Georgian SSR.....	1.9	2.5	3.9	4.4	4.4	4.3
Azerbaijan SSR.....	2.0	2.1	3.3	5.6	5.9	6.6
Lithuanian SSR.....	0.4	1.7	2.4	2.5	2.5	2.5
Moldavian SSR.....	0.6	1.7	4.2	4.5	4.1	3.6
Latvian SSR.....	0.8	1.1	1.7	1.4	1.6	1.6
Kirghiz SSR.....	0.8	1.0	2.6	4.0	4.2	4.5
Tajik SSR.....	0.6	0.8	1.4	2.9	3.3	4.0
Armenian SSR.....	0.7	1.2	2.2	2.8	2.9	2.8
Turkmen SSR.....	0.8	0.9	1.7	2.8	3.2	3.8
Estonian SSR.....	0.3	0.8	0.9	0.9	0.9	1.0

20. Preschool Institutions (at the end of the year; thousands)						
	1940	1950	1960	1970	1975	1980
Number of permanent preschool institutions.....	46.0	45.2	70.6	102.7	115.2	127.7
Including:						
nurseries.....	22.0	19.6	27.0	19.6	15.8	12.1
kindergartens.....	24.0	25.6	37.4	35.4	34.1	32.0
nursery-kindergartens.....	--	--	6.2	47.7	65.3	83.6
Number of children in permanent preschool institutions	1,953	1,788	4,428	9,281	11,523	14,337
Including those:						
in nurseries.....	781	619	1,313	1,181	1,053	873
in kindergartens.....	1,172	1,169	2,756	2,791	2,591	2,387
in nursery-kindergartens...	--	--	359	5,309	7,879	11,077

In addition to permanent preschool institutions, seasonal preschool institutions, and children's playgrounds are organized during the summer period; about 4.7 million children were served by them in 1980 including almost 1.7 million children of preschool age.

21. Number of children in permanent preschool institutions by Union Republics (at the end of the year; thousands of people)						
	1940	1950	1960	1970	1975	1980
USSR.....	1,953	1,788	4,428	9,281	11,523	14,337
RSFSR.....	1,266	1,239	3,038	5,666	6,681	8,149
Ukrainian SSR.....	319	251	589	1,574	2,038	2,444
Belorussian SSR....	64	29	98	274	373	488
Uzbek SSR.....	74	66	173	348	561	915
Kazakh SSR.....	37	46	170	564	709	877
Georgian SSR.....	48	33	58	116	143	169
Azerbaijan SSR.....	57	31	53	111	127	147
Lithuanian SSR.....	14	8	21	80	119	152
Moldavian SSR.....	5	7	28	91	188	266
Latvian SSR.....	6	10	26	72	91	114
Kirghiz SSR.....	7	10	36	90	119	151
Tajik SSR.....	8	10	32	68	87	109
Armenian SSR.....	18	13	33	90	111	135
Turkmen SSR.....	25	27	52	78	102	138
Estonian SSR.....	5	8	21	59	74	83

22. Number of women physical education instructors (at the end of the year; millions)					
	1950	1960	1970	1975	1980
Number of physical education teachers	14.2	28.7	43.6	50.1	63.6
Of those the number of women in- structors.....	5.3	10.1	15.3	17.3	22.5

In 1980, 21 Soviet women were awarded the exalted title of world champion; 53 women were awarded champion of Europe; 54 Soviet women established all union records.

At the present time, women number 61,000 on the regular staff of workers in physical education (teachers, trainers).

23. Children's and youth sports schools (at the end of the year)					
	1950	1960	1970	1975	1980
Number of children's and youth sports schools.....	562	1,814	3,813	5,396	6,473
Number who participated in activities in them, thousands of people	115.7	533.6	1,323.4	1,776.7	2,524.6
Of those, the number of girls and young women.....	41.2	205.7	480.9	576.3	750.9

  

24. Children's institutions that are part of schools (at the end of the year)						
	1970		1975		1980	
	Number of Institutions	Children Served by Them, Thousands	Number of Institutions	Children Served by Them, Thousands	Number of Institutions	Children Served by Them, Thousands
All institutions that are part of schools.....	64,856	27,415	80,366	33,842	99,306	41,910
Including:						
Palaces, pioneer and school- boy homes.....	3,865	1,601	4,403	2,196	4,844	3,149
Young technicians' centers...	606	217	1,008	355	1,353	576
Young naturalists' centers...	338	131	587	206	863	340
Excursion and tourist centers	169	1,065	202	1,019	233	722
Children's parks.....	164	37	155	61	157	31
Children's railroads.....	34	29	38	35	47	43
Summer pioneer camps.....	36,088	8,806	45,980	9,934	59,577	12,085
Children's musical, art and choreography schools.....	4,510	762	6,109	1,080	7,691	1,416
Independent children's libraries.....	6,498	12,810	7,586	16,399	8,367	20,035
Young technicians' clubs.....	1,089	134	1,377	185	1,559	249
Schoolboy rooms.....	7,595	482	7,424	576	8,022	692
Children and youth sports schools.....	3,813	1,323	5,396	1,777	6,473	2,525
Other children's institutions that are part of a school...	87	18	101	19	120	47

  

25. Groups for children in club institutions under the USSR Ministry of Culture and trade union organizations' system (at the end of the year; thousands)				
	1970	1975	1980	
			Total	Including artistic amateur activities
Number of groups.....	113	159	209	158
Participants in them.....	2,188	2,856	3,975	3,664

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